

Set	Items	Description
S1	1530	S OSTEOTOM?
S2	1882132	S SHAVE? ? OR SHAVING? OR CUT OR CUTS OR CUTTING OR REAM??? OR MILL OR MILLS OR MILLED OR MILLER? ? OR MILLING OR BORE? ? OR BORING OR DRILL??? OR SCRAPE? ? OR SCRAPING? OR ABRAD? ? OR ABRADING? OR ABRASION? OR FILE? ? OR FILING?
S3	4537748	S REMOV? OR EXTRACT? OR RESECT? OR SHAPE? ? OR SHAPING OR SHORTEN? OR LENGTHEN?
S4	104807	S BONE OR BONES OR BONEY OR BONED OR OSSEOUS? OR OSTEOAL? OR OSTEOID? OR OSTEOLOG? OR PERIOSTE??? OR OSSIF? OR SKELETON?
S5	150307	S RADIUS OR RADII OR FEMUR OR HUMERUS OR TIBIA? ? OR FIBULA? ? OR METAPHYSEAL? OR METACARPAL? OR META() (PHYSEAL? OR CARPAL?)
S6	286	S KIRSCHNER? OR (K OR KAY) () (WIRE? ? OR WIRING OR PIN OR PINS OR NAIL OR NAILS OR ROD OR RODS OR PEG OR PEGS OR SCREW???) OR KWIRE? OR KPIN? OR KPEG? OR KSCREW? OR KROD?
S7	2305683	S GUIDE? ? OR GUIDING OR GUIDANC? OR PILOT??? OR INTRODUC??? OR DIRECT? ? OR DIRECTING OR DIRECTOR OR DIRECTORS OR TRACK???
S8	2803	S GUIDEWIRE? OR GUIDETRACK? OR GUIDEMEMBER?
S9	2029946	S PLATE OR PLATES OR BONEPLATE? OR ENDPLATE? OR ((BONE? ? OR FRACTUR???) (2N) (REPAIR? OR FIXATION?) (3N) (DEVICE? ? OR APPARAT? OR IMPLANT? OR PROSTHES?))
S10	509738	S IC=(A61B? OR A61F? OR A61D? OR A61M?)
S11	16151	S S2:S3 (3N) S4:S5
S12	8	S (S1 OR S11) AND S6 AND S7:S8 AND S9
S13	19	S (S1 OR S11) AND S6 AND S9
S14	11	S S13 NOT S12
S15	102333	S S7 (3N) (WIRE? ? OR WIRING OR PIN OR PINS OR NAIL OR NAILS OR ROD OR RODS OR PEG OR PEGS OR SCREW???)
S16	21	S (S1 OR S11) AND (S13 OR S8) AND S9
S17	2	S S16 NOT (S12 OR S14)
S18	169	S (S1 OR S11) AND S15 AND S9
S19	80	S (S1 OR S11) (S) S15 (S) S9
S20	77	S S19 NOT (S12 OR S14 OR S17)
S21	68	S S20 AND S10
S22	12585	S S15 (25N) S9
S23	55	S (S1 OR S11) (S) S22
S24	48	S (S23 NOT (S12 OR S14 OR S17)) AND S10
S25	20	S S21 NOT S24
S26	86	S (S1 OR S11) AND S22
S27	26	S (S26 NOT (S12 OR S14 OR S17 OR S24:S25)) AND S10

; show files

[File 350] Derwent WPIX 1963-2006/UD=200707

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*File 350: DWPI has been enhanced to extend content and functionality of the database. For more info, visit <http://www.dialog.com/dwpi/>.

[File 347] JAPIO Dec 1976-2006/Sep(Updated 061230)

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12/5/1 (Item 1 from file: 350) [Links](#)

Derwent WPIX

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0016233026 *Drawing available*

WPI Acc no: 2006-764671/200678

XRPX Acc No: N2006-592086

Metacarpal fracture fixation device, has pin driver, which acts as cannula for creating entry port in surface of skin when it is rotated by trocar drill, and guide groove with cutting edge for guiding insertion of K-wire into port

Patent Assignee: ANONYMOUS (ANON)

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RD 463093	A	20021110	RD 2002463093	A	20021110	200678	B

Priority Applications (no., kind, date): RD 2002463093 A 20021110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RD 463093	A	EN	1	3	

Alerting Abstract RD A

NOVELTY - The device has a pin driver, which acts as a cannula for creating an entry port in a surface of the skin. The pin driver is 3-4 millimeter (mm) in width. A **guide** groove (1) acts as a **guide** for inserting a **K-wire** into the entry port. The groove has a cutting edge and another edge with a relief, such that the pin driver cuts into the bone when it is rotated by a trocar drill.

USE - Used for surgically fixating a metacarpal fracture.

ADVANTAGE - The device uses only one entry port for surgically fixating a metacarpal fracture, such that it is simple to deploy and relatively low in cost compared to conventional metacarpal fracture fixation devices using multiple entry ports and/or cannula.

DESCRIPTION OF DRAWINGS - The drawing shows a pin driver.

1 **Guide** groove

Title Terms /Index Terms/Additional Words: METACARPAL; FRACTURE; FIX; DEVICE; PIN; DRIVE; ACT; CANNULA; ENTER; PORT; SURFACE; SKIN; ROTATING ; TROCAR; DRILL; **GUIDE**; GROOVE; CUT; EDGE; INSERT; WIRE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B	S	I	F	R	20060101

File Segment: EngPI; ;
DWPI Class: P31

12/5/2 (Item 2 from file: 350) [Links](#)

Derwent WPIX

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0015961157 *Drawing available*

WPI Acc no: 2006-492825/200650

Related WPI Acc No: 2003-018100; 2003-440580; 2003-440581; 2004-553077; 2005-232367; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-454198; 2006-522714

XRPX Acc No: N2006-397819

Fracture fixation device has supra-metaphyseal plate that includes fixed angle hole between neck and front end, and space between lip and nail

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: ORBAY J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060161156	A1	20060720	WO 2003US14775	A	20030509	200650	B
			US 2004546127	P	20040220		
			US 2005643432	P	20050107		
			US 200540732	A	20050121		
			US 2005515699	A	20051125		
			US 2006384842	A	20060320		

Priority Applications (no., kind, date): US 2005515699 A 20051125; US 200540732 A 20050121; US 2005643432 P 20050107; US 2004546127 P 20040220; WO 2003US14775 A 20030509; US 2006384842 A 20060320

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20060161156	A1	EN	11	5	C-I-P of application	WO 2003US14775
					Related to Provisional	US 2004546127
					Related to Provisional	US 2005643432
					C-I-P of application	US 200540732
					C-I-P of application	US 2005515699

Alerting Abstract US A1

NOVELTY - The device has intramedullary nail (14) that meets lower surface of supra-metaphyseal **plate** (12) at

neck (16) for receiving bone fixator. The area (23) of **plate** having fixed angle hole between neck and front end (19), is larger than area (25) between neck and rear end (21). The **plate** includes lip (18) which extends to overhang particular region of nail, and space between lip and nail.

USE - For metaphyseal fracture, musculature and tendons.

ADVANTAGE - The fixation device provides proper alignment between longitudinal displaced holes **drilled** in **bone** and corresponding opening in the nail. The space over the edge of the bone increases implant stability upon inserting screws into nail.

DESCRIPTION OF DRAWINGS - The figure shows the side view of **fracture fixation device**.

12 supra-metaphyseal **plate**

14 intramedullary nail

16 neck

19 front end

18 lip

21 rear end

23 larger area

25 smaller area

Title Terms /Index Terms/Additional Words: FRACTURE; FIX; DEVICE ; **PLATE**; ANGLE; HOLE; NECK; FRONT; END; SPACE; LIP; NAIL

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61F-0002/30	A	I	F	B	20060101

US Classification, Issued: 606062000

File Segment: EngPI; ;

DWPI Class: P32

12/5/3 (Item 3 from file: 350) [Links](#)

Derwent WPIX

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0015914667 *Drawing available*

WPI Acc no: 2006-446308/200645

Related WPI Acc No: 2006-492827

XRPX Acc No: N2006-365750

Bone plate system for treating fracture of wrist, has drill guide tips removably pre-assembled in each threaded hole and axis of guide tips aligned with axis of holes

Patent Assignee: CASTANEDA J E (CAST-I); DOYLE W F (DOYL-I); GRAHAM R F (GRAH-I); HAND INNOVATIONS LLC (HAND-N); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; DOYLE W F; GRAHAM R F; ORBAY J L

Patent Family (2 patents, 111 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2006065512	A1	20060622	WO 2005US42969	A	20051128	200645	B
US 20060149250	A1	20060706	US 200411917	A	20041214	200645	E

Priority Applications (no., kind, date): US 200411917 A 20041214

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
WO 2006065512	A1	EN	18	12	
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW				
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				

Alerting Abstract WO A1

NOVELTY - A bone **plate** (10) includes several threaded peg holes (12) for receiving pegs or locking screws, and smaller alignment holes (14) for receiving **K-wires** in a fixed angular orientation. The peg holes are oblique relative to each other. Drill **guide** tips (16) are removably pre-assembled to the holes (12) aligned with their own axes.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for implanting method of a bone **plate**.

USE - For treatment of Colles' fracture of the wrist.

ADVANTAGE - The drill **guide** tip is easily positioned in the peg hole.

DESCRIPTION OF DRAWINGS - The figure shows a perspective view of **bone plate** and a **drill guide** tip assembled or removed with a tool.

10 bone **plate**

12 peg holes

14 alignment holes

16 drill **guide** tip

18 drill **guide** tip assembling tool

Title Terms /Index Terms/Additional Words: BONE; **PLATE**; SYSTEM; TREAT; FRACTURE; WRIST; DRILL; **GUIDE**; TIP; REMOVE; PRE; ASSEMBLE; THREAD; HOLE; AXIS; ALIGN

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/58	A	I	F	B	20060101

A61F-0002/30	A	I	F	B	20060101
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US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31

12/5/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0015818779. *Drawing available*

WPI Acc no: 2006-374646/200639

XRPX Acc No: N2006-316273

Trial component for placement adjacent to bone to aid in selecting bone plate, has stem portion, made from radiolucent material, extending from head portion and having first radiopaque markers indicating lengths of various bone plates

Patent Assignee: STRYKER TRAUMA SA (STRY-N)

Inventor: CROZET Y; LUTZ C; WIRTH R

Patent Family (4 patents, 39 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1661525	A2	20060531	EP 2005405412	A	20050627	200639	B
US 20060116679	A1	20060601	US 2004999665	A	20041130	200639	E
JP 2006150055	A	20060615	JP 2005244285	A	20050825	200643	E
AU 2005202821	A1	20060615	AU 2005202821	A	20050628	200680	E

Priority Applications (no., kind, date): US 2004999665 A 20041130

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 1661525	A2	EN	27	26	
Regional Designated States,Original	AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU				
JP 2006150055	A	JA	32		

Alerting Abstract EP A2

NOVELTY - The trial component (100) has a head portion made partially from a radiolucent material, and a stem

portion extending from the head portion and made partially from radiolucent material. The stem portion has first radiopaque markers indicating the lengths of various **plates** of multiple bone **plates** (300).

DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- handle for positioning a trial component adjacent fracture and for inserting an axially extending bone **plate** into a fracture site;
- an aiming and insertion system for use with a bone **plate**; and
- a method of stabilizing a fractured bone with a bone **plate**

USE - For placement adjacent to bone to aid in selecting bone **plate**.

ADVANTAGE - Minimize scarring and disruption of blood supplies to the muscles through the use of smaller incisions, as well as increase the speed and accuracy of surgical procedures. Providing faster operating times, and maintains or improves ease of handling of bone **plates**, as well as accurately fixating them to bone.

DESCRIPTION OF DRAWINGS - The figure shows the side perspective plan view of a trial component, handle, aiming block and **plate** positioned over a fractured distal femur, and a scalpel being used to make an incision in the leg of a patient through the trial component, where the incision corresponds to a position of a screw that is to be applied to attach the bone **plate** to the femur.

100 Trial component

300 Bone **plates**

300 **Plate**

400 Block

700 Handle

910 Femur

960 Scalpel

Title Terms /Index Terms/Additional Words: TRIAL; COMPONENT; PLACE; ADJACENT; BONE; AID; SELECT; **PLATE**; STEM; PORTION; MADE; MATERIAL; EXTEND; HEAD; FIRST; RADIOPAQUE; MARK; INDICATE; LENGTH; VARIOUS

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/02	A	I	L	B	20060101
A61B-0017/17	A	I	L	B	20060101
A61B-0017/32	A	I	L	B	20060101
A61B-0017/58	A	I	F	B	20060101
A61B-0017/80	A	I	F	B	20060101
A61B-0017/84	A	I	L	B	20060101
A61B-0017/88	A	I	L	B	20060101
A61F-0002/30	A	I	F	B	20060101
A61B-0017/02	C	I	L	B	20060101
A61B-0017/16	C	I	L	B	20060101
A61B-0017/32	C	I	L	B	20060101
A61B-0017/58	C	I	L	B	20060101

A61B-0017/68	C	I	F	B	20060101
A61B-0017/88	C	I	L	B	20060101
A61F-0002/30	C	I	L	B	20060101

US Classification, Issued: 606069000

File Segment: EngPI; ;
DWPI Class: P31

12/5/5 (Item 5 from file: 350) [Links](#)

Derwent WPIX

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0014744329 *Drawing available*

WPI Acc no: 2005-091955/200510

XRPX Acc No: N2005-080278

Aiming device for guiding drilling instruments, drilling sleeves and/or for guiding and placing longitudinal bone-fixing elements relative to a bone-fixing device comprises two centering parts having a pair of coaxial guides

Patent Assignee: SYNTHES CHUR AG (SYNT-N); SYNTHES USA (SYNT-N); MATTHYS R (MATT-I)

Inventor: MATTHYS R; MATTHYS-MARK R; MATTHYS M R

Patent Family (6 patents, 101 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2005004728	A1	20050120	WO 2003CH467	A	20030714	200510	B
AU 2003245785	A1	20050128	AU 2003245785	A	20030714	200525	E
			WO 2003CH467	A	20030714		
EP 1643917	A1	20060412	EP 2003737813	A	20030714	200626	E
			WO 2003CH467	A	20030714		
US 20060161168	A1	20060720	WO 2003CH467	A	20030714	200648	E
			US 2006331896	A	20060113		
BR 200318402	A	20060801	BR 200318402	A	20030714	200655	E
			WO 2003CH467	A	20030714		
KR 2006063888	A	20060612	WO 2003CH467	A	20030714	200673	E
			KR 2006700934	A	20060113		

Priority Applications (no., kind, date): WO 2003CH467 A 20030714

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
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WO 2005004728	A1	DE	16	1		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
AU 2003245785	A1	EN			PCT Application	WO 2003CH467
					Based on OPI patent	WO 2005004728
EP 1643917	A1	DE			PCT Application	WO 2003CH467
					Based on OPI patent	WO 2005004728
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR					
US 20060161168	A1	EN			Continuation of application	WO 2003CH467
BR 200318402	A	PT			PCT Application	WO 2003CH467
					Based on OPI patent	WO 2005004728
KR 2006063888	A	KO			PCT Application	WO 2003CH467
					Based on OPI patent	WO 2005004728

Alerting Abstract WO A1

NOVELTY - Aiming device (1) for **guiding** drilling instruments, drilling sleeves and/or for **guiding** and placing longitudinal bone-fixing elements (4) in a pre-determined direction relative to a bone-fixing device (39) comprises fixing elements (5) for **removably** fixing to a **bone**-fixing device. The aiming device also comprises a first centering part (13) for placing on a bone-fixing device and a second centering part (3) arranged a distance away from the first centering part. The two centering parts have at least one pair of coaxial **guides** (14, 29).

DESCRIPTION - Preferred Features: The bone-fixing device is a bone **plate** (6). The two centering parts have at least two pairs of coaxial **guides** with diverging axes (30).

USE - For **guiding** drilling instruments, drilling sleeves and/or for **guiding** and placing longitudinal bone-fixing elements in a pre-determined direction relative to a bone-fixing device.

ADVANTAGE - A bone-fixing device can be accurately positioned by a surgeon without first implanting a **Kirschner's wire**.

DESCRIPTION OF DRAWINGS - The drawing shows a longitudinal section through the aiming device.

1 aiming device

3, 13 centering part

4 bone-fixing element

5 fixing element

6 bone **plate**

14, 29 **guide**

30 axis

39 bone-fixing device

Title Terms /Index Terms/Additional Words: AIM; DEVICE; **GUIDE**; DRILL; INSTRUMENT; SLEEVE; PLACE; LONGITUDE; BONE; FIX; ELEMENT; RELATIVE; COMPRISE; TWO; CENTRE; PART; PAIR;

COAXIAL

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/17			Main		"Version 7"
A61B-0017/16	A	N		R	20060101
A61B-0017/17	A	I		R	20060101
A61B-0017/17	A	I	F	B	19950101
A61B-0017/60	A	I	F	B	20060101
A61B-0017/56	A	I	F	B	20060101
A61B-0017/58	A	I	F	B	20060101
A61B-0017/88	A	I	F	V	20060101
A61B-0017/16	C	I		R	20060101

US Classification, Issued: 606096000

File Segment: EngPI; ;

DWPI Class: P31

12/5/6 (Item 6 from file: 350) [Links](#)

Derwent WPIX

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0008654819 *Drawing available*

WPI Acc no: 1998-192636/199817

XRPX Acc No: N1998-152530

Integrated surgical reduction clamp and drill guide for simultaneously supporting and aligning adjacent fragments of fractured bone - comprises reference leg with tip and guide leg to guide orientation of fractured bone fixation structure along alignment axis

Patent Assignee: SHOEMAKER S (SHOE-I)

Inventor: SHOEMAKER S

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5725532	A	19980310	US 1996711274	A	19960910	199817	B

Priority Applications (no., kind, date): US 1996711274 A 19960910

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
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US 5725532	A	EN	11	5	
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Alerting Abstract US A

The integrated surgical reduction clamp (10) and drill **guide** (40) comprises a reference leg (50) having a tip (57). There is a **guide** leg (20) having means to **guide** the orientation of a fractured bone fixation structure along an alignment axis (Z) to a desired location passing through the fragments of the bone on opposite sides of the fracture and through the fracture.

The **guide** means includes a hollow cylinder attached to an end of the **guide** leg, and has a central axis collinear with the alignment axis and having an inner cylindrical surface with a diameter not less than a diameter of the bone fixation structure, such that the bone fixation structure can pass through the hollow cylinder. There is a pivot (70) interposed between the reference leg and the **guide** leg, which includes means to resist translation between the reference leg and the **guide** leg and means to allow rotation between the reference leg and the **guide** leg.

ADVANTAGE - Minimal training required to use the clamp and drill which is of simple construction that uses low cost materials, but provides accurate placement of bone reattachment structures.

Title Terms /Index Terms/Additional Words: INTEGRATE; SURGICAL; REDUCE; CLAMP; DRILL; **GUIDE**; SIMULTANEOUS; SUPPORT; ALIGN; ADJACENT; FRAGMENT; FRACTURE; BONE; COMPRISE; REFERENCE; LEG; TIP; ORIENT; FIX; STRUCTURE; AXIS

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/90			Main		"Version 7"
A61B-017/28			Secondary		"Version 7"

US Classification, Issued: 606096000, 606104000, 606207000

File Segment: EngPI; ;
DWPI Class: P31

12/5/7 (Item 7 from file: 350) [Links](#)

Derwent WPIX

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0004476852 *Drawing available*

WPI Acc no: 1988-220167/

Disposable fixture for fractured small tubular bones - has fixing rods which can be bent to fit around bone and which retained standard pins introduced into bones

Patent Assignee: BAGITS T (BAGI-I); CZIFFER E (CZIF-I); CZIFFER E B (CZIF-I); SZACSKY M (SZAC-I)

Inventor: BAGITS T; CZIFFER E; SZACSKY M

Patent Family (7 patents, 17 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1988005288	A	19880728	WO 1987HU38	A	19870915	198831	B
EP 301033	A	19890201	EP 1987906094	A	19870915	198905	E
US 4969886	A	19901113	US 1988273862	A	19881123	199048	E
HU 59580	T	19920629	HU 1987206	A	19870123	199231	E
HU 207654	B	19930528	HU 1987206	A	19870123	199326	E
EP 301033	B1	19940105	EP 1987906094	A	19870915	199402	E
			WO 1987HU38	A	19870915		
DE 3788726	G	19940217	DE 3788726	A	19870915	199408	E
			EP 1987906094	A	19870915		
			WO 1987HU38	A	19870915		

Priority Applications (no., kind, date): HU 1987206 A 19870123

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1988005288	A	EN	20	9		
National Designated States,Original	DK FI JP KR NO US					
Regional Designated States,Original	AT BE CH DE FR GB IT LU NL SE					
EP 301033	A	EN				
Regional Designated States,Original	AT BE CH DE FR GB IT LI LU NL SE					
HU 207654	B	HU			Previously issued patent	HU 59580
EP 301033	B1	EN	10	9	PCT Application	WO 1987HU38
					Based on OPI patent	WO 1988005288
Regional Designated States,Original	AT BE CH DE FR GB IT LI LU NL SE					
DE 3788726	G	DE			Application	EP 1987906094
					PCT Application	WO 1987HU38
					Based on OPI patent	EP 301033
					Based on OPI patent	WO 1988005288

Alerting Abstract WO A

The disposable bone fixture has fixing rods (1) of a soft material, i.e aluminium, which can be bent easily to shape. The rods have a series of bores (2) with axes parallel to each other and with equal spaces between. Standardised pins can be **introduced** into the bores.

The fixing rods can have a circular cross-section. A flat surface (3) parallel with the longitudinal axis at one or both ends of the bores can be formed on the rods.

ADVANTAGE - Functional operation of hand is not impaired.

Title Terms /Index Terms/Additional Words: DISPOSABLE; FIX; FRACTURE; TUBE; BONE; ROD; CAN; BEND; FIT; RETAIN; STANDARD; PIN; INTRODUCING

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56; A61B-017/60			Main		"Version 7"
A61F-005/04			Secondary		"Version 7"

US Classification, Issued: 606059000, 606069000, 606078000

File Segment: EngPI; ;
DWPI Class: P31; P32

12/5/8 (Item 1 from file: 347) [Links](#)

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02821644 **Image available**

ANGLE SETTING DEVICE FOR ARTIFICIAL KNEE JOINT REPLACING OPERATION

Pub. No.: 01-119244 [JP 1119244 A]

Published: May 11, 1989 (19890511)

Inventor: YASUI KOJI

ISHIDA NORIYUKI

Applicant: KYOCERA CORP [358923] (A Japanese Company or Corporation), JP (Japan)

Application No.: 62-276735 [JP 87276735]

Filed: October 30, 1987 (19871030)

International Class: [4] A61B-017/56

JAPIO Class: 28.2 (SANITATION -- Medical)

JAPIO Keyword: R086 (MEDICAL TREATMENT -- Artificial Internal Organs)

Journal: Section: C, Section No. 624, Vol. 13, No. 339, Pg. 160, July 31, 1989 (19890731)

ABSTRACT

PURPOSE: To accurately arrange a femur component, by mounting a **bone cutting** jig on the basis of the **K pin** guide provided to an alignment control disc on the side of the **femur** intercondylar part to **cut** the lower end surface of the femur.

CONSTITUTION: An angle setting instrument for an artificial knee joint replacing operation consists of an

alignment adjusting **plate 1**, whose center of revolution is present directly above the center of the femur intercondylar part, and a **K pin guide 2** so as to be capable of accurately adjusting alignment on the basis of the center of the femur intercondylar part. The **K pin guide 2** is fixed by the alignment corresponding to a case and a **K pin** is arranged so as to thrust in the femur F through the **guide hole 8** provided to the **K pin guide 2** by **drilling**. A **bone cutting jig** is mounted on the basis of said **K pin** and the lower end surface of the **femur** is cut by a **bone saw** through the slit provided to the **bone cutting jig**.

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14/5/1 (Item 1 from file: 350) [Links](#)

Derwent WPIX

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0015752330 *Drawing available*

WPI Acc no: 2006-314097/200633

XRPX Acc No: N2006-266984

Device for optimizing bone fragment fixation to its bed

Patent Assignee: DAGESTAN MED ACAD (DAGE-R)

Inventor: GUSEYNOV A G

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2275880	C2	20060510	RU 2003129748	A	20031006	200633	B

Priority Applications (no., kind, date): RU 2003129748 A 20031006

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2275880	C2	RU		1	

Alerting Abstract RU C2

NOVELTY - Device has irregularly curved **Kirschner** wire having loop for wire cerclage and stepwise bends arranged on both sides of the loop with a structure having three longitudinally arranged fragments for making bone contact. The loop is placed on the middle fragment in the device center with pipes transversely joining three longitudinally arranged fragments. The pipes are displaced towards the loop for preventing engagement with **bone** and are **bow-shaped** to possess springing properties.

USE - Medical engineering.

ADVANTAGE - Enhanced effectiveness of treatment; accelerated treatment course; low treatment costs.4 dwg

Title Terms /Index Terms/Additional Words: DEVICE; OPTIMUM; BONE ; FRAGMENT; FIX; BED

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/80	A	I	L	B	20060101
A61B-0017/82	A	I	F	B	20060101
A61B-0017/68	C	I	F	B	20060101
A61B-0017/68	C	I	L	B	20060101

File Segment: EngPI; ;

DWPI Class: P31

14/5/2 (Item 2 from file: 350) [Links](#)

Derwent WPIX

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0014884631 *Drawing available*

WPI Acc no: 2005-232371/200524

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XPX Acc No: N2005-191399

Volar fixation plate used with fixation pegs and K-wires in fixation system for distal radius fractures, has alignment holes set into predefined axial orientations such that K-wires approximate three-dimensional surface

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: ORBAY J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050065524	A1	20050324	US 2003401089	A	20030327	200524	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
			US 2004985598	A	20041110		

Priority Applications (no., kind, date): US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2004985598 A 20041110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050065524	A1	EN	16	16	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
					C-I-P of application	US 2003689797

Alerting Abstract US A1

NOVELTY - A rigid volar fixation **plate** (102) includes alignment holes for receiving **K-wires**. The alignment holes are set into predefined axial orientations such that the **K-wires** approximate a three-dimensional surface defined by fixation pegs (106,108) inserted into peg holes, when the **K-wires** are inserted into the alignment holes.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a fracture fixation system.

USE - Used with fixation pegs and **K-wires** in fixation system for distal radius fractures.

ADVANTAGE - Aligns and stabilizes multiple bone fragments in fracture to allow proper healing. Can effectively

provide support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of volar fixation **plate**.

100 Fixation system

102 Volar fixation **plate**

106,108 Pegs

116 Main body

118 Head section

Title Terms /Index Terms/Additional Words: FIX; **PLATE**; PEG; WIRE; SYSTEM; DISTAL; RADIUS; FRACTURE; ALIGN; HOLE; SET; PREDEFINED; AXIS; ORIENT; APPROXIMATE; THREE; DIMENSION; SURFACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31

14/5/3 (Item 3 from file: 350) [Links](#)

Derwent WPIX

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0014884630 *Drawing available*

WPI Acc no: 2005-232370/200524

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-191398

Fixation system for distal radius fractures, has K- wire which can be set in non-fixed angle relationship within predefined range of angles in second direction transverse to first direction

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: ORBAY J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050065523	A1	20050324	US 2003401089	A	20030327	200524	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		

			US 2004985597	A	20041110		
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Priority Applications (no., kind, date): US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2004985597 A 20041110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050065523	A1	EN	16	16	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
					C-I-P of application	US 2003689797

Alerting Abstract US A1

NOVELTY - A **K-wire** can be set in a fixed angle relationship in an anterior-posterior first direction when the **K-wire** is received through the alignment hole of a rigid volar fixation **plate** (102). The **K-wire** can be set in a non-fixed angle relationship within a predefined range of angles in a second direction transverse to the first direction.

DESCRIPTION - A rigid volar fixation **plate** (102) includes an alignment hole whose opposite ends individually have a circular opening and a laterally oblong opening.

USE - For aligning and stabilizing multiple bone fragments in a dorsally displaced distal radius fracture.

ADVANTAGE - Aligns and stabilizes multiple bone fragments in fracture to allow proper healing. Can effectively provide support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of volar fixation **plate**.

100 Fixation system

102 Volar fixation **plate**

108 Pegs

116 Main body

118 Head section

Title Terms /Index Terms/Additional Words: FIX; SYSTEM; DISTAL; RADIUS; FRACTURE; WIRE; CAN; SET; NON; ANGLE; RELATED; PREDEFINED; RANGE; SECOND; DIRECTION; TRANSVERSE; FIRST

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31

14/5/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0014884629 *Drawing available*

WPI Acc no: 2005-232369/200524

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-191397

Volar fixation plate used with fixation pegs of fixation system for distal radius fractures, defines first set of linearly arranged holes proximate to buttress, and second set of linearly arranged holes partially defined in buttress

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: ORBAY J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050065522	A1	20050324	US 2003401089	A	20030327	200524	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
			US 2004985596	A	20041110		

Priority Applications (no., kind, date): US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2004985596 A 20041110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050065522	A1	EN	16	16	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
					C-I-P of application	US 2003689797

Alerting Abstract US A1

NOVELTY - The volar fixation **plate** (102) accommodates the anatomy of the volar side of a distal radius bone. The head section (118) of the **plate** includes a buttress which is distally tapered in thickness. The **plate** defines a first set of linearly arranged peg holes proximate to the buttress, and a second set of linearly arranged peg holes partially defined in the buttress.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a **fracture fixation plate implanting method**.

USE - Used with fixation pegs of fixation system for distal radius fractures.

ADVANTAGE - Aligns and stabilizes multiple bone fragments in fracture to allow proper healing. Can effectively provide support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of volar fixation **plate**.

100 Fixation system
 102 Volar fixation plate
 108 Pegs
 116 Main body
 118 Head section

Title Terms /Index Terms/Additional Words: FIX; **PLATE**; PEG; SYSTEM; DISTAL; RADIUS; FRACTURE; DEFINE; FIRST; SET; LINEAR; ARRANGE; HOLE; PROXIMATE; BUTTRESS; SECOND

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;
 DWPI Class: P31

14/5/5 (Item 5 from file: 350) [Links](#)

Derwent WPIX

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0014507989 *Drawing available*

WPI Acc no: 2004-689909/200467

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2004-546634

Stabilizing method for bone fracture, involves removing K-wire after permanently fixing plate over fracture with multiple pegs formed with threads along one or more portions

Patent Assignee: HAND INNOVATIONS INC (HAND-N); HAND INNOVATIONS LLC (HAND-N)

Inventor: ORBAY J L; ORBAY J

Patent Family (4 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040193165	A1	20040930	US 2003401089	A	20030327	200467	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
WO 2005034780	A1	20050421	WO 2004US8752	A	20040322	200527	E
EP 1677690	A1	20060712	EP 2004817171	A	20040322	200648	E
			WO 2004US8752	A	20040322		

AU 2004279290	A1	20050421	AU 2004279290	A	20040322	200674	E
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Priority Applications (no., kind, date): US 2003401089 A 20030327; US 2003664371 A 20030917; US 2003689797 A 20031021

Patent Details						
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040193165	A1	EN	14	14	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
WO 2005034780	A1	EN				
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
EP 1677690	A1	EN			PCT Application	WO 2004US8752
					Based on OPI patent	WO 2005034780
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR					
AU 2004279290	A1	EN			Based on OPI patent	WO 2005034780

Alerting Abstract US A1

NOVELTY - A T-shaped **plate** (102) is placed over a reduced fracture. The reduced fracture is temporarily stabilized, by fixing **plate** over the fracture with **K-wires**. The **K- wire** is removed after permanently fixing the **plate** over fracture with multiple pegs (106,108) formed with threads along one or more portions.

USE - For stabilizing bone fracture.

ADVANTAGE - Enables aligning and stabilizing multiple bone fragments in fracture to permit proper healing. Enables entry and retention of bone pegs within the peg holes due to bone pegs and peg holes within the **plate**. Reduces cross threading by fifty percent due to combination of double lead thread holes and a single helical thread on the peg head. Enables stabilizing and securing head of **plate** on the bone even when pegs do not have threaded shafts. Prevents damage to **bone** caused by **drilling** process since **K-wire** is of relatively small diameter.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of a right hand volar **plate** coupled with pegs.

102 **Plate**

106,108 Pegs

116 Body portion

150 Body alignment hole

Title Terms /Index Terms/Additional Words: STABILISED; METHOD; BONE; FRACTURE; REMOVE; WIRE; AFTER; PERMANENT; FIX; **PLATE**; MULTIPLE ; PEG; FORMING; THREAD; ONE; MORE; PORTION

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/80	A	I		R	20060101
A61B-0017/86	A	N		R	20060101
A61B-0017/56	A	I	F	B	20060101
A61B-0017/58	A	I	L	B	20060101
A61F-0002/30	A	I	L	B	20060101
A61B-0017/68	C	I		R	20060101

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31; P32

14/5/6 (Item 6 from file: 350) [Links](#)

Derwent WPIX

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0014507988 *Drawing available*

WPI Acc no: 2004-689908/200467

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2004-546633

Fixation plate for treating distal radius fractures has fixation plate with non-threaded alignment hole which has a relatively smaller diameter sized to closely receive a K-wire

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: ORBAY J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040193164	A1	20040930	US 2003401089	A	20030327	200467	B
			US 2003664371	A	20030917		

Priority Applications (no., kind, date): US 2003401089 A 20030327; US 2003664371 A 20030917

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
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US 20040193164	A1	EN	13	12	C-I-P of application	US 2003401089
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Alerting Abstract US A1

NOVELTY - The fracture fixation system (100) has a fixation **plate** (102) with two sets of threaded peg holes that individually receive fixation pegs (106,108). One non-threaded alignment hole has a relatively smaller diameter sized to closely receive a **K-wire**. Each alignment hole is located between peg holes.

DESCRIPTION - An INDEPENDENT CLAIM is also included for treating method for distal radius fracture.

USE - For treating distal radius fractures.

ADVANTAGE - Aligns and stabilizes multiple bone fragments at a desired condition in a fracture to permit proper healing. Provides support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows a radial side elevation of a right hand volar **plate**.

100 Fracture fixation system

102 Fixation **plate**

106,108 Pegs

118 Head

Title Terms /Index Terms/Additional Words: FIX; **PLATE**; TREAT; DISTAL; RADIUS; FRACTURE; NON; THREAD; ALIGN; HOLE; RELATIVELY; SMALLER; DIAMETER; SIZE; CLOSELY; RECEIVE; WIRE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31

14/5/7 (Item 7 from file: 350) [Links](#)

Derwent WPIX

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0014401014 *Drawing available*

WPI Acc no: 2004-590421/

XRPX Acc No: N2004-466802

Method for surgical treating pathology in hip joint

Patent Assignee: CHILDREN'S ORTHOPAEDICS RES INST (CHIL-R)

Inventor: POZDNIKIN I YU

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2233134	C1	20040727	RU 2002132778	A	20021205	200457	B

Priority Applications (no., kind, date): RU 2002132778 A 20021205

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2233134	C1	RU	0	1	

Alerting Abstract RU C1

NOVELTY - One should carry out iliac **osteotomy** by developing an osseous spine out of internal cortical **plate** being above an arch-shaped line followed by its applying behind an external cortex and retaining it in this position with **Kirschner's** needles to prevent the loss in correcting iliac fragments.

USE - Medicine, orthopedics.

ADVANTAGE - Higher efficiency of therapy.3 dwg

Title Terms /Index Terms/Additional Words: METHOD; SURGICAL; TREAT; PATHOLOGICAL; HIP; JOINT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

14/5/8 (Item 8 from file: 350) [Links](#)

Derwent WPIX

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0006630987 *Drawing available*

WPI Acc no: 1994-007133/

XRPX Acc No: N1994-005891

Method for bone fixation using wire driver e.g. hands and feet - oscillates advancing wire having number of cutting edges into bone tissue as fixing element

Patent Assignee: NICTER L S (NICH-I)

Inventor: NICTER L S

Patent Family (2 patents, 19 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1993025151	A1	19931223	WO 1993US5663	A	19930611	199401	B
US 6110174	A	20000829	US 1992898120	A	19920612	200043	E
			US 1994185221	A	19940124		

Priority Applications (no., kind, date): US 1994185221 A 19940124; US 1992898120 A 19920612

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1993025151	A1	EN	21	8		
National Designated States,Original	CA JP					
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
US 6110174	A	EN			Continuation of application	US 1992898120

Alerting Abstract WO A1

The method for bore fixation comprises the steps of oscillating a wire having a number of cutting edges about a longitudinal axis, and advancing it into bone tissue. The wire is then left within the bore tissue as a fixation element. The wire is advanced through surrounding soft tissue without wrapping the surrounding soft tissue around the oscillating wire. If the wire is rotated at a speed equal to the oscillation frequency less force is required during advancement. The wire is oscillated over an arc subtended by a selected angle which is at least equal to 360 degrees divided by the number of cutting edges on the wire.

ADVANTAGE - Reduces risk of nearby vascular, nerve and tendon damage, which often occurs through use of traditional rotary drill systems.

Title Terms /Index Terms/Additional Words: METHOD; BONE; FIX; WIRE; DRIVE; HAND; FOOT; OSCILLATING; ADVANCE; NUMBER; CUT; EDGE; TISSUE; ELEMENT; **KIRSCHNER**; WIRES

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/16; A61B-017/68			Main		"Version 7"
A61B-017/56; A61B-017/88			Secondary		"Version 7"

US Classification, Issued: 606072000, 606103000, 606104000

File Segment: EngPI; ;
DWPI Class: P31

14/5/9 (Item 9 from file: 350) [Links](#)

Derwent WPIX

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0003840958

WPI Acc no: 1986-296901/

XRPX Acc No: N1986-221749

Acetabular roof reconstruction - by inserting transplant from iliac crest, with apophysis and sartorius muscle, into diastasis between femur head and iliac body

Patent Assignee: LENGD CHILDRENS ORT (LECH-R); LENGD TRAUMATOLOGY ORTHO (LETR-R)

Inventor: ANDRIANOV V L; MASHKOV V M; TIKHONENKO E S

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
SU 1217383	A	19860315	SU 3723854	A	19840410	198645	B

Priority Applications (no., kind, date): SU 3723854 A 19840410

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
SU 1217383	A	RU	2	0	

Alerting Abstract SU A

According to the proposed method, a transplant from the iliac crest is inserted into the diastasis between the head of the femur and the body of the ilium, together with a pophysis and the sartorius muscle, attached to it. Horizontal **osteotomy** of the ilium is made, at the point of attachment of the articular capsule. The internal cortical **plate** of the body and the wing are cut.

The anteroexternal pt. of the proximal iliac fragment is moved laterally. The iliac crest, with the attached sartorius muscle, is placed in the diastasis between the head of the femur and the iliac body. The transplant is fixed to the iliac body with **Kirschner** wires.

ADVANTAGE - Prevents relapses with subluxation of the femur. Bul.10/15.3.86

Title Terms /Index Terms/Additional Words: ACETABULUM; ROOF; RECONSTRUCT; INSERT; TRANSPLANT; ILIAC; CREST; MUSCLE; DIASTATIC; FEMUR; HEAD; BODY

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Secondary		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

14/5/10 (Item 10 from file: 350) [Links](#)

Derwent WPIX

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0003767199

WPI Acc no: 1986-217263/

XRPX Acc No: N1986-162034

Congenital hip dislocation surgical treatment in older children - cutting out bone plate from inner surface of femur and moving to press on pelvic bones

Patent Assignee: GORKI TRAUM ORTHOPE (GOTR-R)

Inventor: ABAKAROV A A; BATALOV O A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
SU 1202573	A	19860107	SU 3770551	A	19840712	198633	B

Priority Applications (no., kind, date): SU 3770551 A 19840712

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
SU 1202573	A	RU	2	0	

Alerting Abstract SU A

The method of surgical treatment for congenital dislocation of the hip in older children involves separating the subtrochanterian area of the femur and immobilizing the bone fragments.

A layer by layer incision is made in the soft tissues downwards from the greater trochanter, and the subtrochanterian area of the femur is separated subperiosteally. A rectangular bone **plate** up to 10 cm in dimensions is driven out from the femur along its inner surface and is moved until it presses on the bones of the pelvis. The defect formed is filled in with a bone allotransplant and **Kirschner** pins are used to immobilize the bone fragments. The wound is layer sutured closed and a coxofemoral plaster dressing applied for two months.

ADVANTAGE - This method of surgical treatment for congenital dislocation of the hip in older children takes less time and preserves the physiological axis of the limb. Bul.1/7.1.86

Title Terms /Index Terms/Additional Words: CONGENITAL; HIP; DISLOCATE; SURGICAL; TREAT; CHILD; CUT; BONE; **PLATE**; INNER; SURFACE; FEMUR; MOVE; PRESS; PELVIC

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Secondary		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

14/5/11 (Item 11 from file: 350) [Links](#)

Derwent WPIX

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0003473472

WPI Acc no: 1985-247964/

XRPX Acc No: N1985-185329

Femur-head-aseptic-necrosis treatment - by making channel along neck axis, and drilling additional channels in femur epiphysis, before inter trochanteric osteotomy

Patent Assignee: KAZAN TRAUMATOL (KZTR-R)

Inventor: ANDREEV P S; GAFAROV K H Z

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
SU 1146007	A	19850323	SU 3595462	A	19830523	198540	B

Priority Applications (no., kind, date): SU 3595462 A 19830523

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
SU 1146007	A	RU	2	0	

Alerting Abstract SU A

According to the proposed method, before inter trochanteric **osteotomy**, a channel is made along the axis of the femur neck, below the germ zone of the trochanter major, to the epiphyseal **plate**. Additional channels are drilled through the channel thus formed, in the epiphysis of the head, with a **Kirschner** pin. The channel is then filled along the axis of the neck with compressed, spmgy allobone.

ADVANTAGE - Reduces traumaticity of the operation and the time of treatment. Bul.11/23.3.85

Title Terms /Index Terms/Additional Words: FEMUR; HEAD; ASEPTIC; NECROSIS; TREAT; CHANNEL; NECK; AXIS; DRILL; ADD; EPIPHYSIS; INTER; TROCHANTER; **OSTEOTOMY**

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/00			Secondary		"Version 7"

17/5/1 (Item 1 from file: 350) [Links](#)

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0016293416 *Drawing available*

WPI Acc no: 2007-009583/200701

XRAM Acc no: C2007-003560

XRPX Acc No: N2007-007039

Bone e.g. femur bone, fixation device for e.g. horse, has actuatable lock adapted to secure sleeve within intramedullary space of bone, where incision is limited to relatively small location corresponding to proximal end of bone

Patent Assignee: MAZUR K U (MAZU-I); NELSON C L (NELS-I); SARAVIA H (SARA-I); SONOMA ORTHOPEDIC PROD INC (SONO-N)

Inventor: MAZUR K U; NELSON C L; SARAVIA H

Patent Family (4 patents, 111 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2006124764	A1	20061123	WO 2006US18704	A	20060515	200701	B
US 20060264950	A1	20061123	US 2005682652	P	20050518	200701	E
			US 2006383269	A	20060515		
US 20060264951	A1	20061123	US 2005682652	P	20050518	200701	E
			US 2006383275	A	20060515		
US 20060264952	A1	20061123	US 2005682652	P	20050518	200701	E
			US 2006383279	A	20060515		

Priority Applications (no., kind, date): US 2005682652 P 20050518; US 2006383269 A 20060515; US 2006383275 A 20060515; US 2006383279 A 20060515

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2006124764	A1	EN	49	56		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
US 20060264950	A1	EN			Related to Provisional	US 2005682652
US 20060264951	A1	EN			Related to Provisional	US 2005682652
US 20060264952	A1	EN			Related to Provisional	US 2005682652

Alerting Abstract WO A1

NOVELTY - The device (3203) has a sleeve adapted to position in a space formed in a radius bone (3201). A **guidewire** is adapted to guide movement of the sleeve. An actuatable lock is adapted to secure the sleeve within an intramedullary space (3206) of the bone from an end of the device, where an incision is limited to a relatively small location corresponding to a proximal end of the fractured bone. A channel is created within the intramedullary space of the bone and is cleaned to **remove the bone** and fat debris before the deployment of the device through the space within the fractured bone.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a method of repairing a bone fracture.

USE - Used for fixation, reinforcement, reconstruction of diseased, osteoporotic and fractured bones such as radius, femur, tibia humerus, skull, scapula and mandible, of a human subject and an animal subject e.g. horse.

ADVANTAGE - The incision is limited to a relatively small location corresponding to the proximal end of the fractured bone, thus minimizing the physical trauma to the patient in treating the bone fracture and eliminating the risk of pain or necrosis of the bone, and allowing faster patient recovery and wound healing.

DESCRIPTION OF DRAWINGS - The drawing shows a **bone fixation device** in a radius bone.

3201 Radius bone

3202 Fracture

3203 **Bone fixation device**

3204 Bony protuberance

3205 Cortical bone

3206 Intramedullary space

Title Terms /Index Terms/Additional Words: BONE; FEMUR; FIX; DEVICE; HORSE; ACTUATE; LOCK; ADAPT; SECURE; SLEEVE; INTRAMEDULLARY; SPACE; INCISION; LIMIT; RELATIVELY; LOCATE; CORRESPOND; PROXIMITY; END

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/58	A	I	F	B	20060101

US Classification, Issued: 606072000, 606072000, 606072000

File Segment: CPI; EngPI

DWPI Class: B07; C07; D22; P31

Manual Codes (CPI/A-N): B11-C04A; B12-M16; C11-C04A; C12-M16; D09-C01D

17/5/2 (Item 2 from file: 350) [Links](#)

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0005885981 *Drawing available*

WPI Acc no: 1992-114017/

XRPX Acc No: N1992-085306

Intramedullary nailing method - involves distal end of nail being locked to distal end of bone by inserting guide wire into intramedullary canal

Patent Assignee: BETH ISRAEL HOSP (BETH-N); BETH ISRAEL HOSPITAL ASSOC (BETH-N)

Inventor: HAYES W C; HAYESWC

Patent Family (5 patents, 18 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1992003982	A	19920319	WO 1991US2259	A	19910402	199214	B
US 5100404	A	19920331	US 1990577366	A	19900904	199216	E
ZA 199104556	A	19920429	ZA 19914556	A	19910614	199222	E
AU 199176648	A	19920330	AU 199176648	A	19910402	199228	E
			WO 1991US2259	A	19910402		
PT 98853	A	19931130	PT 98853	A	19910903	199351	E

Priority Applications (no., kind, date): US 1990577366 A 19900904

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1992003982	A	EN	37	23		
National Designated States,Original	AU CA FI JP NO					
Regional Designated States,Original	AT CH DE DK ES GB GR LU NL SE					
US 5100404	A	EN	19			
ZA 199104556	A	EN	36			
AU 199176648	A	EN			PCT Application	WO 1991US2259
					Based on OPI patent	WO 1992003982

Alerting Abstract WO A

The method of fixing an intramedullary nail to a bone includes inserting a guide wire into the medullary and obtaining a locator. This locator has grab devices which can grab the guide wire. The locator is inserted through a pilot hole in the rear cortex of the bone in a distal location.

A nail is then inserted along the **guidewire** until it contacts the locator. On the locator are engagement devices to contact the nail.

USE/ADVANTAGE - For achieving the fixation of a bone having a medullary canal, and in particular permits the secure and highly repeatable location of the distal locking screws used in intramedullary nailing of long bone fractures.

Title Terms /Index Terms/Additional Words: INTRAMEDULLARY; NAIL; METHOD; DISTAL; END; LOCK; BONE; INSERT; GUIDE; WIRE; CANAL

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/16; A61B-017/58; A61M			Main		"Version 7"
A61B-017/56; A61F; A61F-002/32			Secondary		"Version 7"

US Classification, Issued: 606062000, 606064000, 606098000

File Segment: EngPI; ;
DWPI Class: P31; P32; P34

?

24/5/1 (Item 1 from file: 350) [Links](#)

Derwent WPIX

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0016315794 *Drawing available*

WPI Acc no: 2007-031963/200704

XRPX Acc No: N2007-023850

Method for eliminating inferior retrognathia

Patent Assignee: MOSC CHILD MAXILLO-FACIAL SURGERY CENTRE (MOCH-R)

Inventor: DUBIN S A; KOMELYAGIN D YU; ROGINSKII V V; SEDYKH A A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2289344	C1	20061220	RU 2005123723	A	20050726	200704	B

Priority Applications (no., kind, date): RU 2005123723 A 20050726

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2289344	C1	RU		1	

Alerting Abstract RU C1

NOVELTY - Method involves carrying out scaled osteotomy as follows. Vertical saw cut is drawn in front of the first premolar 1-2 mm forward from chin orifice. Horizontal saw cut is done below the neurovascular fascicle to mandible angle 2-3 mm lower than tooth roots. Saw cut is drawn through external cortical **plate** and mandible sponge, the internal cortical **plate** being retained intact. Compression-distraction apparatuses are set on bone on each side of the mandible. Apparatus **screw** is **introduced** from each side via tunnel produced in soft tissues and brought out from isolated skin incision in retroaural region. The internal cortical **plate** is destroyed on each side after having set the apparatus. First compression and then dosed distraction of fractured bone fragments is carried out.

USE - Medicine.

ADVANTAGE - Reduced risk of recurrence; enhanced effectiveness of soft tissue adaptation to new mandible position; stable functional and cosmetic results.2 cl

Title Terms /Index Terms/Additional Words: METHOD; ELIMINATE; INFERIOR

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/56	A	I	F	B	20060101

File Segment: EngPI; ;

DWPI Class: P31

24/5/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0016015536 *Drawing available*

WPI Acc no: 2006-547166/200656

XRPX Acc No: N2006-438511

Method for treating fibula having fracture in the lower part of diaphysis with injured crural tibiofibular syndesmosis

Patent Assignee: TARTARSTAN RESTORATIVE TRAUMATOLOGY (TART-R)

Inventor: KHABIBULLIN R F; MIKUSEV G I; MIKUSEV I E

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2282411	C2	20060827	RU 2004117503	A	20040602	200656	B

Priority Applications (no., kind, date): RU 2004117503 A 20040602

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2282411	C2	RU		1	

Alerting Abstract RU C2

NOVELTY - Method involves setting apparatus having two ring-shaped and a half-ring-shaped rests connected with threaded bars. Two rods are introduced into distal fibula fragment above and below the syndesmosis level. The rods are fixed in two single-hole cantilevers connected with their bases to a plate and forming reposition unit together with two threaded bars. The bars are attached to the proximal ring-shaped rest. The fractured bone fragment is set by means of the reposition unit by moving the reposition unit in three planes using nuts. The reposition unit is fixed when achieving fracture reduction.

USE - Medicine.

ADVANTAGE - Enhanced effectiveness in retaining proportions in tibiofibular syndesmosis; reduced risk of inflammatory complications.4 dwg

Title Terms /Index Terms/Additional Words: METHOD; TREAT; FRACTURE; LOWER; PART; DIAPHYSIS; INJURY

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/56	A	I	F	B	20060101

File Segment: EngPI; ;
DWPI Class: P31

24/5/7 (Item 7 from file: 350) [Links](#)

Derwent WPIX

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0014794267 *Drawing available*

WPI Acc no: 2005-141953/200515

Related WPI Acc No: 2005-434939

XRPX Acc No: N2005-120755

Quick release drill guide assembly for e.g. bone plate has ratchet gear that enables sliding of the alignment drill barrel relative to a bushing to radially expand bushing forward end and releasably lock bushing to a bone plate

Patent Assignee: BINDER L J (BIND-I); RYAN C J (RYAN-I); STIHL P (STIH-I); SYNTHES GMBH (SYNT-N);
BINDER L (BIND-I); RYAN C (RYAN-I)

Inventor: BINDER L; BINDER L J; RYAN C; RYAN C J; STIHL P

Patent Family (5 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050038444	A1	20050217	US 2003639515	A	20030813	200515	B
WO 2005016128	A2	20050224	WO 2004US26399	A	20040813	200515	E
EP 1659958	A2	20060531	EP 2004781135	A	20040813	200636	E
			WO 2004US26399	A	20040813		
AU 2004264957	A1	20050224	AU 2004264957	A	20040813	200670	E
BR 200413546	A	20061017	BR 200413546	A	20040813	200670	E
			WO 2004US26399	A	20040813		

Priority Applications (no., kind, date): US 2003639515 A 20030813

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050038444	A1	EN	23	11		
WO 2005016128	A2	EN				
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR					

	TZ UG ZM ZW				
EP 1659958	A2	EN		PCT Application	WO 2004US26399
				Based on OPI patent	WO 2005016128
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR				
AU 2004264957	A1	EN		Based on OPI patent	WO 2005016128
BR 200413546	A	PT		PCT Application	WO 2004US26399
				Based on OPI patent	WO 2005016128

Alerting Abstract US A1

NOVELTY - A user manipulates the tail of a ratchet gear (50) to selectively move the gear. A movement of the ratchet gear enables sliding of the alignment drill barrel relative to a bushing (200) to radially expand bushing forward end and releasably lock bushing to a bone plate (350). One leg of the ratchet gear is connected to the barrel while other leg has pawls (58) that engage serrations of a release knob (100).

DESCRIPTION - An INDEPENDENT CLAIM is also included for drilling holes in bones.

USE - For releasable attachment to a part of the bone fixation system e.g. bone **plate** to guide a **drill bit**, **screw**, **bone fastener** into the bone or a tissue.

ADVANTAGE - Drill guide can be quickly detached and released from the bone plate, improving the speed of surgical procedures involving drilling.

DESCRIPTION OF DRAWINGS - The figure shows a perspective view of the drill guide assembly.

50 Ratchet gear

58 Pawls

100 Release knob

200 Bushing

350 Bone plate

Title Terms /Index Terms/Additional Words: QUICK; RELEASE; DRILL ; GUIDE; ASSEMBLE; BONE; PLATE; RATCHET; GEAR; ENABLE; SLIDE; ALIGN; BARREL ; RELATIVE; BUSHING; RADIAL; EXPAND; FORWARD; END; LOCK

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/17			Main		"Version 7"
A61B-0017/00	A	N		R	20060101
A61B-0017/17	A	I		R	20060101
A61B-0017/17	A	I	F	B	20060101
A61B-0017/00	C	N		R	20060101
A61B-0017/16	C	I		R	20060101

US Classification, Issued: 606096000

File Segment: EngPI; ;

DWPI Class: P31

24/5/10 (Item 10 from file: 350) [Links](#)

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0014242974 *Drawing available*

WPI Acc no: 2004-429013/

XRPX Acc No: N2004-338997

Osteosynthesis method for treating the cases of fractured tibia condyle

Patent Assignee: MINER'S HEALTH PROTECTION RES CLINICAL (MINE-R)

Inventor: GILEV YA KH; MILYUKOV A YU; PRONSKIKH A A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2228152	C2	20040510	RU 2002107192	A	20020320	200440	B

Priority Applications (no., kind, date): RU 2002107192 A 20020320

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2228152	C2	RU	0	1	

Alerting Abstract RU C2

NOVELTY - Method involves making condyle osteotomy. Articulation surface reduction is carried out. Supporting member is introduced into the arisen defect in parallel to the articulation surface as T-shaped metal plate end bent at an angle long part of the plate having holes for receiving screws and modeled as condyle. The long plate part is attached to the tibia with screws below the fracture line. Condyle fragment is fixed with screw introduced in perpendicular to the fracture plane above the T-shaped metal plate end in particular case.

USE - Medicine.

ADVANTAGE - Enhanced effectiveness in repairing articulation surfaces congruence; early beginning of movements; improved prophylaxis of stiffness. 2 cl, 6 dwg

Title Terms /Index Terms/Additional Words: OSTEOSYNTHESIS; METHOD; TREAT; CASE; FRACTURE; TIBIA; CONDYLE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/11 (Item 11 from file: 350) [Links](#)

Derwent WPIX

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0013984753 *Drawing available*

WPI Acc no: 2004-165763/

XRPX Acc No: N2004-131977

Method for building of lower jaw bone defect by way of distraction osteogenesis

Patent Assignee: KONMET INC STOCK CO (KONM-R); NIKITIN A A (NIKI-I)

Inventor: IBRAGIMOVA A EH; KRASHENINNIKOV L A; NIKITIN A A; NIKITIN D A ; TETYUKHIN D V

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2221512	C2	20040120	RU 2001133049	A	20011207	200416	B

Priority Applications (no., kind, date): RU 2001133049 A 20011207

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2221512	C2	RU	0	1	

Alerting Abstract RU C2

NOVELTY - Compression- distraction apparatus is fixed on lower jaw; it has **plates** for fixing apparatus on lower jaw which are made of material enabling their bending by hand to follow **bone shape, guide rods**, and carriage displaced over the latter by means of drive screw and provided with wires screwed in holes; wires can be released by turning out the screws, shifted within hole, and fixed anew with aid of screws. Bone fragment with wires screwed therein is incised. Using carriage first compression is effected at point of **osteotomy**, and then incised fragment is displaced over contour of lower jaw part being restored until it is brought in contact with other fragment of lower jaw bone. In the course of displacement fragment is corrected through height. Fixation is made till maturation of regenerate. Proposed method enables displacement of fragment over path following outline of lower jaw part being restored.

USE - Medicine; orthopedics and traumatology; building of lower jaw bone defect.

ADVANTAGE - Provision for building lower jaw defects of great length. 1 cl, 19 dwg

Title Terms /Index Terms/Additional Words: METHOD; BUILD; LOWER; JAW; BONE; DEFECT; WAY; DISTRACTION; OSSIFY

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"
A61B-017/24; A61B-017/66			Secondary		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/12 (Item 12 from file: 350) [Links](#)

Derwent WPIX

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0013866333 *Drawing available*

WPI Acc no: 2004-044931/200405

XRPX Acc No: N2004-036612

Arrangement for partly replacing surfaces and bone under stress involves cylindrical basic body implant

Patent Assignee: DRAENERT K (DRAE-I)

Inventor: DRAENERT K

Patent Family (4 patents, 28 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
DE 10225217	A1	20031218	DE 10225217	A	20020606	200405	B
WO 2003103535	A2	20031218	WO 2003DE1880	A	20030605	200409	E
EP 1592360	A2	20051109	EP 2003756969	A	20030605	200574	E
			WO 2003DE1880	A	20030605		
US 20060015189	A1	20060119	WO 2003DE1880	A	20030605	200607	E
			US 2005545442	A	20050815		

Priority Applications (no., kind, date): DE 10225217 A 20020606

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
DE 10225217	A1	DE	14	16		
WO 2003103535	A2	DE				
National Designated States,Original	US					
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR					
EP 1592360	A2	DE			PCT Application	WO 2003DE1880

				Based on OPI patent	WO 2003103535
Regional Designated States, Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR				
US 20060015189	A1	EN		PCT Application	WO 2003DE1880

Alerting Abstract DE A1

NOVELTY - The implant (100) comprises a spherical or axial preferably cylindrical basic body (116) for replacing part removed from a bone (102) by drilling or punching. The basic body has at least one surface(104) substituting for part of a surface. The basic body has at least one end side (106)

USE - Implant for partial replacement of surfaces under stress, especially joint surfaces.

ADVANTAGE - Stressed surfaces such as used for chewing or joints are partly replaced without needing total replacement.

DESCRIPTION OF DRAWINGS - The drawing shows an example of punching out and replacing a damaged joint surface.

100 Implant

102 Bone

104 Basic body surface

106 End side

116 Basic body.

Title Terms /Index Terms/Additional Words: ARRANGE; REPLACE; SURFACE; BONE; STRESS; CYLINDER; BASIC; BODY; IMPLANT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61F-002/00; A61F-002/02			Main		"Version 7"
A61B-017/16; A61C-013/01; A61C-013/08; A61C-008/00; A61F-002/30; A61F-002/46			Secondary		"Version 7"
A61B-0017/16	A	I	L	B	20060101
A61B-0017/17	A	I	L	B	20060101
A61F-0002/30	A	I	F	B	20060101

US Classification, Issued: 623023440, 623017170, 606080000, 606096000

File Segment: EngPI; ;

DWPI Class: P31; P32

24/5/13 (Item 13 from file: 350) [Links](#)

Derwent WPIX

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0013205386 *Drawing available*

WPI Acc no: 2003-289648/

XRPX Acc No: N2003-230472

Bone plate assembly for holding bone in place while fracture in the bone heals, has screw which spans the angle between first and second extending portions of bone plate

Patent Assignee: AIKINS J L (AIKI-I); CORNWALL G B (CORN-I); DESJARDINS R (DESJ-I); DUWELIUS P (DUWE-I); GOULET J (GOUL-I); MEYERS J E (MEYE-I); MOON S A (MOON-I); PRICE G G (PRIC-I); ROUSSEAU P (ROUS-I); TEMPLEMAN D (TEMP-I); WILEY R (WILE-I); WINQUIST R A (WINQ-I)

Inventor: AIKINS J L; CORNWALL G B; DESJARDINS R; DUWELIUS P; GOULET J; MEYERS J E; MOON S A; PRICE G G; ROUSSEAU P; TEMPLEMAN D; WILEY R; WINQUIST R A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20030040748	A1	20030227	US 2001939412	A	20010824	200328	B

Priority Applications (no., kind, date): US 2001939412 A 20010824

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20030040748	A1	EN	28	33	

Alerting Abstract US A1

NOVELTY - The bone plate assembly (70) includes a bone plate (72) including first and second extending portions (74,76) defining an angle between and each having at least one hole. A screw extends through a hole in one of the first and second portions and threadingly engages a hole in the other of the first and second portions. The screw spans the angle between the first and second portions.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a method of securing a blade plate to a bone.

USE - For holding bone in place while fracture in the bone heals.

ADVANTAGE - Provides improved bone fixation about the fracture, increased patient comfort and improved accuracy of installation.

DESCRIPTION OF DRAWINGS - The figure is a partial sectional view through a bone having a fracture, including a blade plate assembly secured to a bone.

70Bone plate assembly

72Bone plate

74,76Extending portions

Title Terms /Index Terms/Additional Words: BONE; PLATE; ASSEMBLE ; HOLD; PLACE; FRACTURE; SCREW; SPAN; ANGLE; FIRST; SECOND; EXTEND; PORTION

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606070000

File Segment: EngPI; ;

DWPI Class: P31

24/5/14 (Item 14 from file: 350) [Links](#)

Derwent WPIX

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0012870057 *Drawing available*

WPI Acc no: 2002-729071/200279

XRPX Acc No: N2002-575380

Jig for high tibial osteotomy, has circular arc movable plate provided on movable jig and mounted with two cylindrical guides passed by correction wire and one of guide wires

Patent Assignee: KOGA Y (KOGA-I); NIIGATA ENG CO LTD (NIIG); NIIGATA MACHINE TECHNO KK (NIIG)

Inventor: AKUTSU K; KOGA Y; KURITA T

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 2002272753	A	20020924	JP 200176776	A	20010316	200279	B
JP 3815240	B2	20060830	JP 200176776	A	20010316	200659	E

Priority Applications (no., kind, date): JP 200176776 A 20010316

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
JP 2002272753	A	JA	10	12		
JP 3815240	B2	JA	12		Previously issued patent	JP 2002272753

Alerting Abstract JP A

NOVELTY - A high tibial osteotomy jig (A) has a jig main body (1) and a movable jig (2). Two cylindrical guides (12,13) are mounted to a circular arc movable plate (9) on the movable jig. A guide wire, passed through one of the guides, is attached to the distal face of a tibial bone end. A correction wire, passed through the other guide, is stuck to the same distal face.

DESCRIPTION - The jig main body has a circular arc support plate (4) mounted with a cylindrical retainer (7). Another guide wire, passed through the retainer, is stuck to the proximal face of the tibial bone end.

USE - For high tibial osteotomy with respect to knee osteoarthritis.

ADVANTAGE - Smoothly and correctly attaches guide wire and correction wire to distal face of tibial bone end, enabling distal portion of bone end to be moved to correct position.

DESCRIPTION OF DRAWINGS - The figure shows the front view of a high tibial osteotomy jig.

1 Jig main body

2 Movable jig

4 Support plate

7 Cylindrical retainer

9 Movable plate

12,13 Cylindrical guides

A High tibial osteotomy jig

Title Terms /Index Terms/Additional Words: JIG; HIGH; TIBIA; OSTEOTOMY; CIRCULAR; ARC; MOVE; PLATE; MOUNT; TWO; CYLINDER; GUIDE; PASS; CORRECT; WIRE; ONE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/16			Main		"Version 7"
A61B-017/56			Secondary		"Version 7"
A61B-0017/16	A	I	F	B	20060101
A61B-0017/56	A	I	L	B	20060101

File Segment: EngPI; ;

DWPI Class: P31

24/5/15 (Item 15 from file: 350) [Links](#)

Derwent WPIX

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0012746124 *Drawing available*

WPI Acc no: 2002-598998/

XRPX Acc No: N2002-475122

Orthopedic plate for use during orthopedic surgery, has recesses provided adjacent to holes for inserting hooks for grasping plate

Patent Assignee: SUDDABY L (SUDD-I)

Inventor: SUDDABY L

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20020082606	A1	20020627	US 2000741752	A	20001221	200264	B
US 6436103	B1	20020820	US 2000741752	A	20001221	200264	E

Priority Applications (no., kind, date): US 2000741752 A 20001221

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20020082606	A1	EN	13	13	

Alerting Abstract US A1

NOVELTY - An array of holes (12) is provided in the plate (10), for receiving screws and drill guides. Recesses (14) are provided adjacent to the holes into which hooks are fitted for grasping plate, while **bone** is **drilled** and screws are inserted into the holes.

DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

1. Tool for grasping orthopedic plate; and
2. Orthopedic plate application method.

USE - For use during orthopedic surgery for fixing bones in specified position.

ADVANTAGE - Allows for easier and more accurate screw placement without altering the drill guide position. Allows drill to hold securely while in use and prevents drilling or tapping too deeply.

DESCRIPTION OF DRAWINGS - The figure shows the plan view of drill guide and plate attachment mechanism.

10 Plate

12 Hole

14 Recesses

Title Terms /Index Terms/Additional Words: ORTHOPAEDIC; PLATE; SURGICAL; RECESS; ADJACENT; HOLE; INSERT; HOOK; GRASP

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/80; A61B-017/90			Main		"Version 7"

US Classification, Issued: 606096000, 606069000, 606096000, 606069000

File Segment: EngPI; ;

DWPI Class: P31

24/5/16 (Item 16 from file: 350) [Links](#)

Derwent WPIX

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0012505052 *Drawing available*

WPI Acc no: 2002-452931/200248

Related WPI Acc No: 2002-105310; 2002-303583; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2002-357072

Volar fixation plate, has rigid t-shaped plate with distal head having a number of threaded peg holes adapted to individually receive fixation pegs

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: ORBAY J L

Patent Family (1 patents; 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6364882	B1	20020402	US 2000495854	A	20000201	200248	B
			US 2000524058	A	20000313		

Priority Applications (no., kind, date): US 2000495854 A 20000201; US 2000524058 A 20000313

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 6364882	B1	EN	11	24	C-I-P of application	US 2000495854

Alerting Abstract US B1

NOVELTY - A rigid T-shaped plate (102) has a proximal body (118) angled relative to the distal head (116). The distal head has a number of threaded peg holes (130,132,134,136) adapted to individually receive fixation pegs (108). Each peg hole has a center substantially lying along a parabolic curve.

USE - For fixing a Colles' fracture.

ADVANTAGE - Desirably aligns and stabilizes multiple bone fragments in a distal radial fracture to permit proper healing.

DESCRIPTION OF DRAWINGS - The figure shows the top volar view of a right hand volar fixation system.

102 Rigid t-shaped plate

108 Fixation pegs

116 Distal head

118 Proximal body

130,132,134,136 Threaded peg holes

Title Terms /Index Terms/Additional Words: FIX; PLATE; RIGID; T-SHAPED; DISTAL; HEAD; NUMBER; THREAD; PEG; HOLE; ADAPT; INDIVIDUAL; RECEIVE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
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A61B-017/80			Main		"Version 7"
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US Classification, Issued: 606069000, 606060000

File Segment: EngPI; ;

DWPI Class: P31

24/5/17 (Item 17 from file: 350) [Links](#)

Derwent WPIX

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0011167760 *Drawing available*

WPI Acc no: 2002-105310/200214

Related WPI Acc No: 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2002-078300

Volar fixation system with articulating stabilization pegs, has bone screws which secure the T-shape plate along an non-fractured portion of the radial bone, and bone pegs extending from the plate and into bone fragments

Patent Assignee: HAND INNOVATIONS INC (HAND-N); HAND INNOVATIONS LLC (HAND-N)

Inventor: LEONE J; ORBAY J; ORBAY J L; ORBAY L

Patent Family (13 patents, 87 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20010011172	A1	20010802	US 2000495854	A	20000201	200214	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
AU 200133015	A	20010814	AU 200133015	A	20010129	200214	E
WO 2001056452	A2	20010809	WO 2001US2605	A	20010129	200214	E
US 6358250	B1	20020319	US 2000495854	A	20000201	200224	E
US 6440135	B2	20020827	US 2000495854	A	20000201	200259	E
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
EP 1251790	A2	20021030	EP 2001905098	A	20010129	200279	E
			WO 2001US2605	A	20010129		
KR 2002081282	A	20021026	KR 2002709742	A	20020729	200317	E
JP 2003529414	W	20031007	JP 2001556153	A	20010129	200370	E
			WO 2001US2605	A	20010129		
MX 2002007250	A1	20030901	WO 2001US2605	A	20010129	200465	E

			MX 20027250	A	20020725		
BR 200108011	A	20041207	BR 20018011	A	20010129	200507	E
			WO 2001US2605	A	20010129		
AU 2001233015	B2	20050811	AU 2001233015	A	20010129	200558	E
EP 1251790	B1	20060524	EP 2001905098	A	20010129	200635	E
			WO 2001US2605	A	20010129		
DE 60119890	E	20060629	DE 60119890	A	20010129	200643	E
			EP 2001905098	A	20010129		
			WO 2001US2605	A	20010129		

Priority Applications (no., kind, date): US 2000524058 A 20000313; US 2000495854 A 20000201; US 2000735228 A 20001212

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20010011172	A1	EN	12	28	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
AU 200133015	A	EN			Based on OPI patent	WO 2001056452
WO 2001056452	A2	EN				
National Designated States,Original	AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
Regional Designated States,Original	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
US 6440135	B2	EN			C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
EP 1251790	A2	EN			PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2003529414	W	JA	38		PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
MX 2002007250	A1	ES			PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
BR 200108011	A	PT			PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
AU 2001233015	B2	EN			Previously issued patent	AU 2001233015
					Based on OPI patent	WO 2001056452
EP 1251790	B1	EN			PCT Application	WO 2001US2605

					Based on OPI patent	WO 2001056452
Regional Designated States, Original	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					
DE 60119890	E	DE			Application	EP 2001905098
					PCT Application	WO 2001US2605
					Based on OPI patent	EP 1251790
					Based on OPI patent	WO 2001056452

Alerting Abstract US A1

NOVELTY - The volar fixation system has a T-shaped plate (102) intended to be positioned against the volar side of the radial bone. Bone screws (102) secure the plate along a non-fractured portion of the radial bone, and bone pegs (108) extend from the plate and into bone fragments (16,18,20) of a Colles' fracture. The T-shaped plate includes screw holes and threaded peg holes. The pegs can be articulated through a range of angles within respective peg holes and fixed at a desired angle within the range.

DESCRIPTION - The volar plate is positioned against the radius and screws are inserted through the screw holes to secure the volar plate to the radius. The bone fragments are aligned, and the holes are drilled through the peg holes into the fragments. The pegs are inserted through the peg holes and into the drilled holes in the bone. The pegs can be oriented at various angles relative to an axis normal to the lower surface of the plate. For each peg, once the peg has been appropriately positioned within the peg hole, a set screw is thread into the peg hole and tightened, thereby securing the peg in the selected orientation.

USE - As a bone fixation system, especially for Colles' (or distal radial) fracture.

ADVANTAGE - Desirable aligns and stabilizes multiple bone fragments in a distal radial fracture to promote proper healing. Is highly adjustable to provide a customizable framework for bone fragment stabilization.

DESCRIPTION OF DRAWINGS - The figure shows the volar fixation system for in situ aligning and stabilizing of Colles' fracture.

10 radius bone

16,18,20 bone fragments

102 T-shape plate

104 bone screws

108 pegs

120 first side of the head portion

Title Terms /Index Terms/Additional Words: FIX; SYSTEM; ARTICULATE; STABILISED; PEG; BONE; SCREW; SECURE; SHAPE; PLATE; NON; FRACTURE; PORTION; RADIAL; EXTEND; FRAGMENT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B; A61B-017/00; A61B-017/58; A61B-017/80			Main		"Version 7"
F16B-001/02			Secondary		"Version 7"
A61B-0017/80	A	I	F	B	20060101
A61B-0017/17	A	N		R	20060101
A61B-0017/68	A	I		R	20060101

A61B-0017/80	A	I		R	20060101
A61B-0017/80	A	I	F		20060101
A61B-0017/84	A	N		R	20060101
A61B-0017/68	C	I	F	B	20060101
A61B-0017/16	C	N		R	20060101
A61B-0017/68	C	I		R	20060101
A61B-0017/68	C	I	F		20060101

US Classification, Issued: 606069000, 606069000, 606069000, 606060000

File Segment: EngPI; ;
DWPI Class: P31; Q61

24/5/18 (Item 18 from file: 350) [Links](#)

Derwent WPIX

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0010369381 *Drawing available*

WPI Acc no: 2000-685477/

XRPX Acc No: N2000-506624

Method and device for treating fractures and pseudoarthroses of femoral neck

Patent Assignee: URALS TRAUMATOLOGY ORTHOPAEDICS RES INST (URTR-R)

Inventor: IBRAGIMOV G I; LAVRUKOV, A M

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2152762	C1	20000720	RU 1999106906	A	19990331	200067	B

Priority Applications (no., kind, date): RU 1999106906 A 19990331

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2152762	C1	RU	0	1	

Alerting Abstract RU C1

NOVELTY - Method involves introducing threaded rods of 6 mm diameter through pseudoarthrosis or fractured bone zone in parallel to one another into the neck and head of the femur. Threaded portions of the working rod ends go completely into the femur head. One or two threaded rods are introduced into the trochanteric zone some distance apart from pseudoarthrosis zone. Free ends of the threaded rods are fixed on arch-shaped plates of proximal base of the device. The parallel rods are fixed with controlled compression. The arch-shaped plates are connected with

threaded tie-rods. Two threaded rods are introduced into each of proximal and distal regions of diaphysis along its anteroexternal surface at an angle of 20-45 deg to one another. Their free ends are fixed on both sides of the arch-shaped plates and the distal base of the device creating crossover on some extent. The arch-shaped plates are connected with threaded tie-rods. Oblique intertrochanteric femur **osteotomy** is carried out, distal femur fragment is placed under pseudoarthrosis zone and femur head. The proximal and distal bases of the device are joined using threaded tie-rods with compression created on splinter fragments junction. Compression in the pseudoarthrosis zone is controlled by screwing nuts on parallel threaded rods.

USE - Medicine.

ADVANTAGE - Enhanced effectiveness of treatment; controlled interfragmental compression; reliable fixation. 2 cl, 1 dwg

Title Terms /Index Terms/Additional Words: METHOD; DEVICE; TREAT ; FRACTURE; FEMORAL; NECK

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"
A61B-017/60			Secondary		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/21 (Item 21 from file: 350) [Links](#)

Derwent WPIX

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0008815393 *Drawing available*

WPI Acc no: 1998-360826/

XRPX Acc No: N1998-281688

Extension procedure for metatarsal bones and phalanges of toes - uses Ilizarov apparatus and guide wire inserted transosseally through phalanges and metatarsal bones

Patent Assignee: TATARSTAN RECOVERY TRAUMATOLOGY CENTRE (TATA-R)

Inventor: PANKOV I O; PLAKSIN S V; SKVORTSOV A P

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2098036	C1	19971210	RU 199445528	A	19941228	199831	B

Priority Applications (no., kind, date): RU 199445528 A 19941228

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
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RU 2098036	C1	RU	3	1	
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Alerting Abstract RU C1

A procedure for extending the metatarsal bones and phalanges of the foot which are short as a result of osteomyelitis or dysplasia consists of fitting an Ilizarov apparatus with supports for the heel and middle of the foot, with wires (10) passed vertically through the bone fragments to be extended, bent over and connected to a traction mechanism (2,4,5).

A **guide wire** (9) is inserted transosseally through the phalanges and metatarsal bone as far as the point of the **osteotomy**, and a wire (10) with a **plate** is inserted through the distal fragment of the bone to be extended from the sole to the upper side of the foot until the plate is in contact with the plantar surface.

ADVANTAGE - Procedure restores normal anatomical relationships, reduces operating trauma, restores foot's supporting capacity, eliminates cosmetic defects and gives improved results.

Title Terms /Index Terms/Additional Words: EXTEND; PROCEDURE; METATARSAL; BONE; TOE; APPARATUS; GUIDE; WIRE; INSERT; THROUGH

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

24/5/22 (Item 22 from file: 350) [Links](#)

Derwent WPIX

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0008187027 *Drawing available*

WPI Acc no: 1997-290268/199727

XRPX Acc No: N1997-240172

Osteosynthesis plate for length adjustment of osteotomy - has two plate parts with threaded holes for adjustment screws , and mechanical guide with at least two cylindrical pins moulded on the first plate part and pointing in the lengthwise direction of movement

Patent Assignee: ESKA IMPLANTS GMBH & CO (ESKA-N)

Inventor: GRUNDEI H; HASSE A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
DE 19542064	C1	19970605	DE 19542064	A	19951113	199727	B

Priority Applications (no., kind, date): DE 19542064 A 19951113

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
DE 19542064	C1	DE	4	4	

Alerting Abstract DE C1

Two plate parts (1,2) fixed to the bone parts (14) bridge the osteotomy (18). The plate parts are mounted so as to be length adjustable by means of a mechanical guide. The plate parts are postoperatively continuously length adjustable by means of a gear mechanism.

The mechanical guide consists of at least two cylindrical pins (3,4) moulded on the first plate part and pointing in the lengthwise direction of movement. The second plate part contains two cylindrical holes (11). Both plate parts have threaded holes (10) for adjusting screws (13) beside the holes (11) for the bone screws (17). Both sets of holes are in at least two rows.

ADVANTAGE - The osteosynthesis plate can be matched to the surface of the bone so that both plate parts have sufficient support surfaces or points on the bone.

Title Terms /Index Terms/Additional Words: OSTEOSYNTHESIS; PLATE ; LENGTH; ADJUST; OSTEOTOMY; TWO; PART; THREAD; HOLE; SCREW; MECHANICAL; GUIDE; CYLINDER; PIN; MOULD; FIRST; POINT; LENGTHWISE; DIRECTION; MOVEMENT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"
A61B-017/68; A61C-008/00; A61F-002/28			Secondary		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31; P32

24/5/23 (Item 23 from file: 350) [Links](#)

Derwent WPIX

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0008059010 *Drawing available*

WPI Acc no: 1997-154004/

XRPX Acc No: N1997-127264

Finger joint fixation method - uses combination template to guide sawing, drilling and smoothing of middle

and distal phalanges, and screw assembly to compress phalanges together

Patent Assignee: COMBS C R (COMB-I); COMBS C R M (COMB-I)

Inventor: COMBS C R

Patent Family (3 patents, 21 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1997005836	A1	19970220	WO 1996US12446	A	19960730	199714	B
AU 199666417	A	19970305	AU 199666417	A	19960730	199726	E
US 5667510	A	19970916	US 1995510721	A	19950803	199743	E

Priority Applications (no., kind, date): US 1995510721 A 19950803

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1997005836	A1	EN	35	7		
National Designated States,Original	AU CA JP					
Regional Designated States,Original	AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
AU 199666417	A	EN			Based on OPI patent	WO 1997005836
US 5667510	A	EN	11	.6		

Alerting Abstract WO A1

The method involves temporarily fitting the combination template (20) over the middle phalanx (22) and using, firstly, its slots (26) to guide the sawing of the end of the middle phalanx, and then its attached tube (30) to guide a drill at an angle through the middle phalanx and longitudinally into the distal phalanx (24).

After using a special tool to smooth the end of the distal phalanx, a fixation plate (40) is screwed to the middle phalanx with its integral positioning tube (42) projecting through the drilled hole into the longitudinal hole in the proximal phalanx. Finally a compression screw (52) is used to compress the bones together at the angle set by the template.

ADVANTAGE - The method allows small, damaged joints to be prepared and stabilised for fusion at a set angle accurately and quickly. Because it remains within the tissues, the compression screw avoids external contact that could disrupt healing.

Title Terms /Index Terms/Additional Words: FINGER; JOINT; FIX; METHOD; COMBINATION; TEMPLATE; GUIDE; SAW; DRILL; SMOOTH; MIDDLE; DISTAL; SCREW; ASSEMBLE; COMPRESS

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56; A61F-005/00			Main		"Version 7"

US Classification, Issued: 606086000, 606069000, 606073000, 606085000, 606087000

File Segment: EngPI; ;
DWPI Class: P31; P32

24/5/25 (Item 25 from file: 350) [Links](#)

Derwent WPIX

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0007774682 *Drawing available*

WPI Acc no: 1996-400365/

XRPX Acc No: N1996-337422

Osteosynthesis apparatus for fractures to the neck of the femur - has threaded rod with slots for diaphysis plate guides and additional plate

Patent Assignee: SARAT TRAUMATOLOGY ORTHOPAEDY RES INST (SATR-R)

Inventor: IVANOV V M; POTEKHIN V F; ZHADENOV I I

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2050841	C1	19951227	SU 5049906	A	19920629	199640	B

Priority Applications (no., kind, date): SU 5049906 A 19920629

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2050841	C1	RU	5	11	

Alerting Abstract RU C1

The apparatus consists of a threaded rod (1) with diametrically-opposite slots for sliding guides of a diaphysis plate, and a nut (4). The rod has an additional rectangular slot lying perpendicular to the diametrically-opposite slots and containing a plate (3) with a shaped end engaging with a slot in the nut. The plate has an angled tip and is held in place by a locking pin inserted through holes in the rod and plate.

The threaded rod is inserted into a hole made along the neck of the femur by an electric drill, and positioned with the additional slot up or down according to the position of the fracture. The diaphysis guides are then inserted and the plate fixed to the femur by screws, the nut is fitted and the additional plate put into place.

ADVANTAGE - Rod guides and plates provide reliable stabilisation of bone fragments, preventing aseptic necrosis and making for earlier mobilisation of patient. Bul. 36/27.12.95

Title Terms /Index Terms/Additional Words: OSTEOSYNTHESIS; APPARATUS; FRACTURE; NECK; FEMUR; THREAD; ROD; SLOT; DIAPHYSIS; PLATE; GUIDE; ADD

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/78			Main		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/26 (Item 26 from file: 350) [Links](#)

Derwent WPIX

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0007673718 *Drawing available*

WPI Acc no: 1996-294731/199630

XRPX Acc No: N1996-247957

Femur head and neck fixing for treatment of femur head rotation osteotomy and femur neck part fracture - has plate to suit contours of boxes and fixing of main, sub and bone screws through guide holes and angular adjustments

Patent Assignee: 4S MEDICAL YG (FOUR-N)

Inventor: ATSUMI T

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 8126650	A	19960521	JP 1994292392	A	19941101	199630	B
JP 3077049	B2	20000814	JP 1994292392	A	19941101	200043	E

Priority Applications (no., kind, date): JP 1994292392 A 19941101

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
JP 8126650	A	JA	6	7		
JP 3077049	B2	JA	5		Previously issued patent	JP 08126650

Alerting Abstract JP A

The frame (1) includes a specially contoured plate (2) with guide holes (2e) and an integral tube (6) for attaching a main screw (3).

A guide hole (2b) is provided for inserting a sub-screw (4). For fixing bone screws (5), guide holes (2c) are provided. Tilting angle (alpha) of main screw is adjustable from 125 degrees to 135 degrees. Tilting angle (beta) of sub-screw is adjustable within 20 degrees.

ADVANTAGE - Prevents deformation and disturbance of setting after operation. Ensures faster rehabilitation.

Avoids shortening of neck portion by providing stable joint. Achieves even load dispersion of strength of joint.

Title Terms /Index Terms/Additional Words: FEMUR; HEAD; NECK; FIX; TREAT; ROTATING; OSTEOTOMY; PART; FRACTURE; PLATE; SUIT; CONTOUR; BOX; MAIN; SUB; BONE; SCREW; THROUGH; GUIDE; HOLE; ANGULAR; ADJUST

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"
A61B-017/58			Secondary		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/27 (Item 27 from file: 350) [Links](#)

Derwent WPIX

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0007450479 *Drawing available*

WPI Acc no: 1996-060117/

XRPX Acc No: N1996-050116

Guide for fitting osteotomy plate - comprising support fitting over selected bone section which has guide aperture for plate vane and slots for bone-cutting saw blade

Patent Assignee: AFRIAT J (AFRI-I)

Inventor: AFRIAT J

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
FR 2721195	A1	19951222	FR 19947968	A	19940621	199607	B

Priority Applications (no., kind, date): FR 19947968 A 19940621

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
FR 2721195	A1	FR	14	7	

Alerting Abstract FR A1

The guide consists of a support (6) shaped to fit over a predetermined section (7) of a bone, e.g. its external cortical surface. The support is made with an aperture (8) to guide a cutter making a channel for an angled vane on the plate,

and slots (9) to guide a cutting instrument such as a saw blade for performing the **osteotomy**. A fixing screw (10) holds the **guide** in place against the bone while the channel and saw cuts are being made.

The saw blade guide slots are set at an angle to one another to allow a wedge-shaped section to be **cut** from the **bone**. The vane on the **osteotomy** plate is made with a rib of varying height along its under-surface.

USE/ADVANTAGE - More convenient **osteotomy** plate fitting and more precise correction of bone deformation. Correction of internal femoral-tibial arthrosis.

Title Terms /Index Terms/Additional Words: GUIDE; FIT; OSTEOTOMY ; PLATE; COMPRISE; SUPPORT; SELECT; BONE; SECTION; APERTURE; VANE; SLOT; SAW; BLADE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/80			Main		"Version 7"
A61B-017/86			Secondary		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/29 (Item 29 from file: 350) [Links](#)

Derwent WPIX

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0007143970 *Drawing available*

WPI Acc no: 1995-178599/199523

Related WPI Acc No: 1994-279331

XRPX Acc No: N1995-140261

Anterior cervical plate holder drill and guide - has two pivotal arms having feet attached at each end to grasp plate using hooks which insert through hole in plate and head fixation pins.

Patent Assignee: DANEK MEDICAL INC (DANE-N)

Inventor: COATES B J; LOWERY G L

Patent Family (8 patents, 58 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1995011632	A1	19950504	WO 1994US12259	A	19941026	199523	B
US 5423826	A	19950613	US 199314415	A	19930205	199529	E
			US 1993145079	A	19931029		
AU 199481255	A	19950522	AU 199481255	A	19941026	199534	E
EP 744920	A1	19961204	WO 1994US12259	A	19941026	199702	E
			EP 1995900428	A	19941026		
JP 9504213	W	19970428	WO 1994US12259	A	19941026	199727	E

			JP 1995512791	A	19941026		
AU 679587	B	19970703	AU 199481255	A	19941026	199735	E
EP 744920	A4	19970528	WO 1994US12354	A	19941027	199746	E
CN 1138291	A	19961218	CN 1994194558	A	19941026	199806	E

Priority Applications (no., kind, date): US 199314415 A 19930205; US 1993145079 A 19931029

Patent Details						
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1995011632	A1	EN	55	20		
National Designated States,Original	AM AU BB BG BR BY CA CN CZ EE FI GE HU JP KG KP KR KZ LK LR LT LV MD MG MN NO NZ PL RO RU SI SK TJ TT UA UZ VN					
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ					
US 5423826	A	EN	25	20	C-I-P of application	US 199314415
					C-I-P of patent	US 5364399
AU 199481255	A	EN			Based on OPI patent	WO 1995011632
EP 744920	A1	EN	46	77	PCT Application	WO 1994US12259
					Based on OPI patent	WO 1995011632
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 9504213	W	JA	44		PCT Application	WO 1994US12259
					Based on OPI patent	WO 1995011632
AU 679587	B	EN			Previously issued patent	AU 9481255
					Based on OPI patent	WO 1995011632
EP 744920	A4	EN				

Alerting Abstract WO A1

First and second arms are provided with the first arm attached to the second arm, and each having proximal and distal ends. A first foot is attached to the proximal end of the first arm and a second foot attached to the proximal end of the second arm. Each foot defines a number of through-holes sized to receive a drilling tool, and each hole is disposed in alignment with a screw bore in the spinal plate when the tool is engaged to a spinal plate.

A hook is attached to each foot, defining a surface for engaging an edge of the spinal plate. A locking mechanism is configured to lock said feet in a position relative to each other to engage the spinal plate between the hook of each foot with the through-holes aligned with the plate screw bores.

ADVANTAGE - Minimises the amount of intrusion at the instrumentation site, and is achieved by the reduced number of components required to achieve rigid fixation of the bone screws to bore and plate.

Title Terms /Index Terms/Additional Words: ANTERIOR; CERVIX; PLATE; HOLD; DRILL; GUIDE; TWO; PIVOT; ARM; FOOT; ATTACH; END; GRASP; HOOK; INSERT; THROUGH; HOLE; HEAD; FIX; PIN

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/16; A61B-017/17; A61B-017/58			Main		"Version 7"
A61B-017/56; A61B-017/90			Secondary		"Version 7"

US Classification, Issued: 606096000, 606069000, 606061000

File Segment: EngPI; ;
DWPI Class: P31

24/5/30 (Item 30 from file: 350) [Links](#)

Derwent WPIX

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0006980399 *Drawing available*

WPI Acc no: 1994-279331/199434

Related WPI Acc No: 1995-178599

XRPX Acc No: N1994-220113

System for anterior fixation of spine - includes plate with bore screw slots in middle bridge portion and pairs of screw bores at opposite ends

Patent Assignee: DANEK MEDICAL INC (DANE-N); SDGI HOLDINGS INC (SDGI-N)

Inventor: COATES B J; LOWERY G; RAY E F; RAY E F I; SHERMAN M C

Patent Family (18 patents, 47 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1994017744	A1	19940818	WO 1994US851	A	19940124	199434	B
US 5364399	A	19941115	US 199314415	A	19930205	199445	E
AU 199460948	A	19940829	AU 199460948	A	19940124	199501	E
			WO 1994US851	A	19940124		
ZA 199400777	A	19941130	ZA 1994777	A	19940204	199503	E
EP 683646	A1	19951129	EP 1994907308	A	19940124	199601	E
			WO 1994US851	A	19940124		
JP 8506502	W	19960716	JP 1994518080	A	19940124	199650	E
			WO 1994US851	A	19940124		
EP 683646	A4	19960731	WO 1994AT14	A	19940209	199701	E
TW 285636	A	19960911	TW 1994103813	A	19940427	199704	E
CN 1119411	A	19960327	CN 1994191413	A	19940124	199744	E
AU 692147	B	19980604	AU 199460948	A	19940124	199839	E
MX 187113	B	19971125	MX 1994830	A	19940201	199934	E

EP 1106144	A1	20010613	EP 1994907308	A	19940124	200134	E
			EP 2001200941	A	19940124		
EP 683646	B1	20011024	EP 1994907308	A	19940124	200169	E
			WO 1994US851	A	19940124		
			EP 2001200941	A	19940124		
DE 69428780	E	20011129	DE 69428780	A	19940124	200202	E
			EP 1994907308	A	19940124		
			WO 1994US851	A	19940124		
ES 2165384	T3	20020316	EP 1994907308	A	19940124	200227	E
KR 315572	B	20020424	WO 1994US851	A	19940124	200270	E
			KR 1995703286	A	19950804		
CA 2154470	C	20040518	CA 2154470	A	19940124	200434	E
			WO 1994US851	A	19940124		
JP 3537436	B2	20040614	JP 1994518080	A	19940124	200439	E
			WO 1994US851	A	19940124		

Priority Applications (no., kind, date): US 199314415 A 19930205

Patent Details						
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1994017744	A1	EN	41	13		
National Designated States,Original	AU BB BG BR BY CA CN CZ FI HU JP KP KR KZ LK LV MG MN MW NO NZ PL RO RU SD SK UA UZ VN					
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE					
US 5364399	A	EN	17	13		
AU 199460948	A	EN			PCT Application	WO 1994US851
					Based on OPI patent	WO 1994017744
ZA 199400777	A	EN	34			
EP 683646	A1	EN	41	13	PCT Application	WO 1994US851
					Based on OPI patent	WO 1994017744
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LI MC NL PT SE					
JP 8506502	W	JA	42		PCT Application	WO 1994US851
					Based on OPI patent	WO 1994017744
EP 683646	A4	EN				
TW 285636	A	ZH				
AU 692147	B	EN			Previously issued patent	AU 9460948
					Based on OPI patent	WO 1994017744
EP 1106144	A1	EN			Division of application	EP 1994907308
					Division of patent	EP 683646

Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE										
EP 683646	B1	EN			PCT Application			WO 1994US851			
					Related to application			EP 2001200941			
					Related to patent			EP 1106144			
					Based on OPI patent			WO 1994017744			
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE										
DE 69428780	E	DE			Application			EP 1994907308			
					PCT Application			WO 1994US851			
					Based on OPI patent			EP 683646			
					Based on OPI patent			WO 1994017744			
ES 2165384	T3	ES			Application			EP 1994907308			
					Based on OPI patent			EP 683646			
KR 315572	B	KO			PCT Application			WO 1994US851			
					Previously issued patent			KR 96700658			
					Based on OPI patent			WO 1994017744			
CA 2154470	C	EN			PCT Application			WO 1994US851			
					Based on OPI patent			WO 1994017744			
JP 3537436	B2	JA	11		PCT Application			WO 1994US851			
					Previously issued patent			JP 08506502			
					Based on OPI patent			WO 1994017744			

Alerting Abstract WO A1

The system comprises an elongated fixation plate (20) having a longitudinal axis and a length along the axis sufficient to span between at least two vertebrae. It includes a lower surface adapted to engage the anterior portion of the vertebrae, and an opposite upper surface. A pair of screw bores (27) are defined at both of the first and second ends between the lower and upper surfaces, and displaced from each other transverse to the longitudinal axis of the plate.

The pair of screw bores have centrelines that diverge relative to each other and relative to the lower surface of the plate. Several bone engaging screws (40) are provided, one each for each of the pair of screw bores at both of the first and second ends.

USE - Esp. for application as anterior cervical plating system.

Title Terms /Index Terms/Additional Words: SYSTEM; ANTERIOR; FIX ; SPINE; PLATE; BORE; SCREW; SLOT; MIDDLE; BRIDGE; PORTION; PAIR; OPPOSED; END

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B; A61B-017/058; A61B-017/58; A61B-017/70			Main		"Version 7"
A61B-017/17; A61B-017/88;					

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31; P32

24/5/32 (Item 32 from file: 350) [Links](#)

Derwent WPIX

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0006345626 *Drawing available*

WPI Acc no: 1993-142789/199317

XRPX Acc No: N1993-108906

Method for internal fixation of bone fractures - initially aligning fractured bone and bone segments and drilling pilot holes in bone and segments to receive non-metallic screws

Patent Assignee: ETHEREDGE J L (ETHE-I)

Inventor: ETHEREDGE J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5201733	A	19930413	US 1992823253	A	19920121	199317	B

Priority Applications (no., kind, date): US 1992823253 A 19920121

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 5201733	A	EN	7	7	

Alerting Abstract US A

The method comprises the steps of positioning bone elements of the fractures in correct anatomical relationship and drilling at least one temporary fixation hole in the bone elements across the fractures. The next step is inserting a non-metallic fixation device in the fixation hole for temporarily securing the bone elements in the correct anatomical relationship and fitting at least one metal permanent reconstruction member to the bone elements.

The next step is drilling two permanent fixation holes in the bone elements without regard to the location of the non-metallic fixation device, and inserting metallic fixation devices in the fixation holes for securing the reconstruction member on the bone elements and the bone elements in the correct anatomical relationship.

ADVANTAGE - Less chance of bone fixation failure.

Title Terms /Index Terms/Additional Words: METHOD; INTERNAL; FIX ; BONE; FRACTURE; INITIAL; ALIGN; SEGMENT; DRILL; PILOT; HOLE; RECEIVE; NON ; METALLIC; SCREW

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61F-005/04			Main		"Version 7"

US Classification, Issued: 606053000, 606060000

File Segment: EngPI; ;
DWPI Class: P32

24/5/34 (Item 34 from file: 350) [Links](#)

Derwent WPIX .

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0006054295 *Drawing available*

WPI Acc no: 1992-291494/

XRPX Acc No: N1992-223159

Femur osteotomy osteosynthesis device - intra-osseous end is bent at angle between minus 60 and plus 60 degrees in plane of plate

Patent Assignee: RUTSKII V V (RUTS-I)

Inventor: RUTSKII V V; TIKHILOV R M

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
SU 1683724	A1	19911015	SU 4668265	A	19890109	199235	B

Priority Applications (no., kind, date): SU 4668265 A 19890109

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
SU 1683724	A1	RU	2	1	

Alerting Abstract SU A1

The osteosynthesis device includes a supraosseous plate (1) with intraosseous end (2) bent at an angle between -60 and +60 degrees in the plane of the supraosseous plate (1) and a master form made similarly to the plate. The intraosseous end (2) is made with conical apertures (3) to take screws through the bone. The supraosseous plate (1) has apertures (4) for screws and a support surface (5) in the form of a roll on its endface. The intraosseous end (2) is introduced into the proximal fragment. Screws are introduced into the distal fragment through the apertures (4) in the supraosseous plate (1) and into the proximal fragment through the conical apertures (3) in the intraosseous end (2) with the help of the master form (3).

USE/ADVANTAGE - For osteosynthesis in **osteotomy** of the femur, increasing the rigidity of fixation in angle

displacements of the corrected bone fragments and increase the accuracy of fixation. Bul.38/15.10.91.

Title Terms /Index Terms/Additional Words: FEMUR; OSTEOTOMY; OSTEOSYNTHESIS; DEVICE; INTRA; OSSEOUS; END; BEND; ANGLE; MINUS; PLUS; DEGREE; PLANE; PLATE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

File Segment: EngPI; ;
DWPI Class: P31

24/5/35 (Item 35 from file: 350) [Links](#)

Derwent WPIX

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0005867496 *Drawing available*

WPI Acc no: 1992-094553/

XRPX Acc No: N1992-070592

Corrective osteotomy osteosynthesis device - has plates linked to each other by under sprung screw and have guides at angle and runners

Patent Assignee: BELO TRAUMATOLOGY (BTRA-R)

Inventor: DULUB O I; KRYUCHOK V G; NIKO; NIKOLAEV V N

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
SU 1644930	A	19910430	SU 4677144	A	19890411	199212	B

Priority Applications (no., kind, date): SU 4677144 A 19890411

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
SU 1644930	A	RU	4	5	

Alerting Abstract SU A

Two plates (1,2) with fasteners are joined to each other by a threaded joint (8). The plates (1,2) are linked to each other by undersprung screws (8) and made with guides (5) positioned at an angle and runners (4) linked by a "swallowtail" joint.

USE/ADVANTAGE - For osteosynthesis in corrective osteotomy, to ensure constant compression of the fragments

without changing the length of the limb. Bul. 16/30.4.91

Title Terms /Index Terms/Additional Words: CORRECT; OSTEOTOMY; OSTEOSYNTHESIS; DEVICE; PLATE; LINK; SPRING; SCREW; GUIDE; ANGLE; RUNNER

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Secondary		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

24/5/37 (Item 37 from file: 350) Links

Derwent WPIX

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0005135131 *Drawing available*

WPI Acc no: 1990-123996/

XRPX Acc No: N1990-096192

Method for resection of distal femur - has femoral alignment guide rod and plate to fit into resection slot

Patent Assignee: PETERSEN T D (PETE-I)

Inventor: PETERSEN T D

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4907578	A	19900313	US 1986888525	A	19860723	199016	B
			US 1988247495	A	19880922		

Priority Applications (no., kind, date): US 1988247495 A 19880922

Alerting Abstract US A

The parent application discloses a femoral alignment guide/rod includes a plate insertable within a guide slot in the resector which is also used for the guided insertion of a cutting tool. An auxiliary attachment on the resector allows attachment of a new femoral alignment guide/rod on the resector housing proximal to the cutting tool guide A gauge is incorporated in the resector which allows compensation for the angle between the mechanical axis of the leg and the longitudinal extent of the internal cavity of the femur while also allowing compensation or correction for specific anatomical conditions such as, for example, valgus correction. @(13pp Dwg.No .12/14)@

Title Terms /Index Terms/Additional Words: METHOD; RESECTION; DISTAL; FEMUR; FEMORAL; ALIGN; GUIDE; ROD; PLATE; FIT; SLOT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Secondary		"Version 7"

US Classification, Issued: 606079000, 606088000

File Segment: EngPI; ;

DWPI Class: P31

24/5/38 (Item 38 from file: 350) [Links](#)

Derwent WPIX

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0004851951 *Drawing available*

WPI Acc no: 1989-229267/198932

Related WPI Acc No: 1988-251832; 1992-081860

Knee prosthesis bone surface prepn. device - has clamping instruments, distractor, templates and cutting guides

Patent Assignee: HOWMEDICA INC (HOWN); PFIZER HOSPITAL PROD GROUP INC (PFIZ)

Inventor: EWALD F C; POGGIE M P; WALKER P S

Patent Family (6 patents, 9 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 327249	A	19890809	EP 1989300706	A	19890125	198932	B
EP 327249	B	19920506	EP 1989300706	A	19890125	199219	E
US 5116338	A	19920526	US 1988151734	A	19880203	199224	E
			US 1991645388	A	19910124		
DE 68901386	E	19920611	DE 68901386	A	19890125	199225	E
			EP 1989300706	A	19890125		
US 5250050	A	19931005	US 1988151734	A	19880203	199341	E
			US 1991645388	A	19910124		
			US 1992876642	A	19920430		
CA 1324548	C	19931123	CA 589770	A	19890201	199402	E

Priority Applications (no., kind, date): US 1992876642 A 19920430; US 1991645388 A 19910124; US 1988151734 A 19880203

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes

EP 327249	A	EN	25	55		
Regional Designated States,Original	AT CH DE FR GB IT LI					
EP 327249	B	EN	28			
Regional Designated States,Original	AT CH DE FR GB IT LU					
US 5116338	A	EN	29		Division of application	US 1988151734
					Division of patent	US 5002547
DE 68901386	E	DE			Application	EP 1989300706
					Based on OPI patent	EP 327249
US 5250050	A	EN	28	55	Division of application	US 1988151734
					Division of application	US 1991645388
					Division of patent	US 5002547
					Division of patent	US 5116338
CA 1324548	C	EN				

Alerting Abstract EP A

The device comprises cutting guides (6, 61), templates (25), alignment devices (101), and a distractor (44). It also comprises clamping instruments (11) which provide modularity and facilitate bone resection and prosthesis implantation.

USE - A modular device for use in the preparation of bone surfaces and the implantation of a modular total knee prosthesis in a patient.

Title Terms /Index Terms/Additional Words: KNEE; PROSTHESIS; BONE; SURFACE; PREPARATION; DEVICE; CLAMP; INSTRUMENT; DISTRACTION; TEMPLATE; CUT; GUIDE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/00; A61B-017/56; A61F-002/46			Main		"Version 7"

US Classification, Issued: 606090000, 606096000, 606079000, 606082000, 606088000, 606089000

File Segment: EngPI; ;

DWPI Class: P31; P32; P42

24/5/39 (Item 39 from file: 350) [Links](#)

Derwent WPIX

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0004542228 *Drawing available*

WPI Acc no: 1988-292096/

Instrument for resection of distal femur - includes feeler gauge laterally adjustable to inter condylar notch and rotating rod with openings for fastening pins

Patent Assignee: PETERSEN T (PETE-I)

Inventor: PETERSEN T

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4773407	A	19880927	US 1986888525	A	19860723	198841	B

Priority Applications (no., kind, date): US 1986888525 A 19860723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 4773407	A	EN	7	7	

Alerting Abstract US A

The instrument includes a distal femoral resector and a femoral alignment guide rod. The distal femoral resector is attached to the distal femur on a plane filed on the anterior femoral cortex. The distal femoral resector includes a feeler gauge laterally adjustable to adapt to the inter condylar notch of the patient and further includes a rotating rod having openings for fastening pins.

The rotating rod facilitates the placement of the resector on the anterior femoral cortex in a flush manner. The femoral alignment **guide rod** includes a **plate** insertable within a slot in the resector designed for the insertion of the cutting tool and further includes a pivotable rod which may be utilised to align the resector with the mechanical axis of the leg. The rod may then be pivoted to a position facilitating the insertion of a fastening pin through the resector. USE - Instrument for **resection** of the distal **femur** during hip joint replacement.

Title Terms /Index Terms/Additional Words: INSTRUMENT; RESECTION ; DISTAL; FEMUR; FEELER; GAUGE; LATERAL; ADJUST; INTER; CONDYLE; NOTCH; ROTATING; ROD; OPEN; FASTEN; PIN

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61F-005/04			Secondary		"Version 7"

US Classification, Issued: 606088000

File Segment: EngPI; ;
DWPI Class: P32

24/5/41 (Item 41 from file: 350) [Links](#)

Derwent WPIX

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0003548449

WPI Acc no: 1985-073929/

Related WPI Acc No: 1983-820646

Drill guide device for bone plate fixation - includes clamp blocks carrying bone-engaging scissor clamp assemblies each having upstanding and screw-connected handles

Patent Assignee: US DEPT HEALTH & HUMAN SERVICE (USSH)

Inventor: DUGGAN S; FOSTER C; MINER J; VANTUCCI J; WEIGLE R M; WOZLEY M

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4502475	A	00000000	US 1983468776	A	19830222	198512	B
			US 1983571545	A	19831228		

Priority Applications (no., kind, date): SE 19822672 A 19820428

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 4502475	A	EN	8	7	

Alerting Abstract US A

The drill guide device consists of an elongated drill guide block having a longitudinal recess for receiving and positioning a bone plate having screw openings. The guide block has spaced openings axially aligned with the bone plate screw openings and containing removable drill guide bushings. The guide block is longitudinally slotted at its ends for adjustable attachment to clamp blocks carrying respective bone-engaging scissor clamp assemblies connected by tie rods.

The tie rods have hexagonal centre portions shaped for driving engagement by a wrench. The scissor clamp assemblies have upstanding opposite top handle portions connected by clamping screws. The outer end portion of each clamping screw is provided with a clamping nut. The clamp assemblies have opposing bone-engaging jaws moved towards each other when the associated clamping nuts are tightened.

ADVANTAGE - Strength and durability.

Title Terms /Index Terms/Additional Words: DRILL; GUIDE; DEVICE; BONE; PLATE; FIX; CLAMP; BLOCK; CARRY; ENGAGE; SCISSORS; ASSEMBLE; UPSTANDING; SCREW; CONNECT; HANDLE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
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A61F-005/04			Secondary		"Version 7"
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US Classification, Issued: 606105000, 606086000, 606096000

File Segment: EngPI; ;

DWPI Class: P32

24/5/42 (Item 42 from file: 350) [Links](#)

Derwent WPIX

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0003123928

WPI Acc no: 1984-218706/198435

Surgical device for connection of fractured bones - comprises L-shaped body having one arm connected to connector plate by guide tubes extending through holes in plate

Patent Assignee: GOTFRIED Y (GOTF-I)

Inventor: GOTFRIED Y

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4465065	A	19840814	US 1983456403	A	19830107	198435	B

Priority Applications (no., kind, date): US 1983456403 A 19830107

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 4465065	A	EN	8	8	

Alerting Abstract US A

The L-shaped surgical device has a connector plate provided with a sharp lower edge by which it penetrates through a small incision in the trochanter region into close contact with the shaft. During the operation, the upper end of the plate is temporarily attached to the horizontal arm of the device, while its vertical arm extends parallel to the plate and is provided with holes in continuation of holes in the plate.

Guide tubes are provided which extend through the holes in the arm to the holes in the plate after having been pushed through the soft tissue. The tubes serve as guides for pre-drilling of the bone parts on the correct position and subsequently for the insertion of long screws and fixation of the broken parts by tightening of the screws. The guide tubes are subsequently withdrawn and the device is detached from the connector plate which remains inside the tissue connected to the bone by the screws.

USE - Serves for the connection of a fractured neck to the shaft of a femur by means of a pre-drilled connector plate without the requirement of making a large incision in the overlying skin and tissue.

Title Terms /Index Terms/Additional Words: SURGICAL; DEVICE; CONNECT; FRACTURE; BONE; COMPRISE; SHAPE; BODY; ONE; ARM; PLATE; GUIDE; TUBE; EXTEND; THROUGH; HOLE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/18; A61F-005/04			Secondary		"Version 7"

US Classification, Issued: 606065000, 606096000

File Segment: EngPI; ;
DWPI Class: P31; P32

24/5/44 (Item 1 from file: 347) [Links](#)

JAPIO

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08252266 ****Image available****

ARTIFICIAL HIP JOINT TOOL USED IN CONJUNCTION WITH SUBTROCHANTERIC OSTEOTOMY

Pub. No.: 2005-000526 [JP 2005000526 A]

Published: January 06, 2005 (20050106)

Inventor: HOTOKEBUCHI TAKAO

ISHIDA NORIYUKI

Applicant: HOTOKEBUCHI TAKAO

KYOCERA CORP

Application No.: 2003-169632 [JP 2003169632]

Filed: June 13, 2003 (20030613)

International Class: A61F-002/36

ABSTRACT

PROBLEM TO BE SOLVED: To enhance accuracy of **osteotomy** to **cut two bone** parts of the femur separately broken below the trochanter in a predetermined form, to match medurally space axes of **femur** of which **cut** surfaces are connected, and to prevent breaking during the implant of the artificial hip joint.

SOLUTION: The artificial hip joint tool includes a medurally space inserting brooch with plural engaging holes for pins arranged in a line with predetermined spaces to be inserted into the **femur**, a **cutting** guide plate having holes for pins in a line with the same space as the engaging holes to be installed on the outer surface of the femur, and the

connecting pins which are inserted through the inserting holes for **pins** of the cutting **guide plate** and connect the medurally space inserting brooch and the cutting guide **plate** by being engaged in the holes for pins of the medurally space inserting brooch. The cutting guide plate provides slits pairing at the left and right side of the inserting holes for pins in a line.

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24/5/47 (Item 4 from file: 347) [Links](#)

JAPIO

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05353357 ****Image available****

FEMUR BORING GUIDE

Pub. No.: 08-308857 [JP 8308857 A]

Published: November 26, 1996 (19961126)

Inventor: KURAMOTO KOICHI

KAWAI YASUHIRO

HATAKE MASA HARU

Applicant: NAKASHIMA PROPELLER KK [403165] (A Japanese Company or Corporation), JP (Japan)

Application No.: 07-145299 [JP 95145299]

Filed: May 19, 1995 (19950519)

International Class: [6] A61B-017/56; A61B-017/16; A61F-002/46

JAPIO Class: 28.2 (SANITATION -- Medical)

ABSTRACT

PURPOSE: To enable a femur cutter guide to be set in a desired position at a femur distal end.

CONSTITUTION: This **femur boring** guide is provided with a holder to be held against the end face of a femur distal end, an alignment bar which has a pin that abuts to a reference point on the front side of the femur distal end and which is horizontally movably mounted on the holder 30, and a base 34 which has a receiving plate 44 that abuts to the rear face of the femur distal end and which is vertically movably mounted on the holder 30 for the sizing of the thickness of the femur distal end sandwiched between the receiving **plate** 44 and the **pin**. The **femur boring guide** further includes a drill guide, in which two right and left guide holes 60 through which to pass a drill for drilling a reference hole in the end face of the femur distal end in order to set a femur cutter guide are formed, and which is attached to the holder 30 by set screws 50 provided in the center of each guide hole, in such a way that the drill guide can be horizontally tilted by a desired angle.

24/5/48 (Item 5 from file: 347) [Links](#)

JAPIO

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05199446 ****Image available****

BONE CUTTING PLATE WITH GUIDE

Pub. No.: 08-154946 [JP 8154946 A]

Published: June 18, 1996 (19960618)

Inventor: YAMADA IKUFUMI

Applicant: YAMADA IKUFUMI [000000] (An Individual), JP (Japan)

Application No.: 06-335182 [JP 94335182]

Filed: December 09, 1994 (19941209)

International Class: [6] A61B-017/56

JAPIO Class: 28.2 (SANITATION -- Medical)

ABSTRACT

PURPOSE: To enable accurate insertion of a part such as a hook part, namely, a **plate** to be inserted into a **bone cutting bone** by producing a part on a guide so as to allow the insertion of a steel **wire** functioning as a **guide**.

CONSTITUTION: An internal fixing device for cutting bones comprises a **plate 3** to be inserted securely into a **bone cutting bone 2** having a part 6 which allows the insertion of a steel **wire** functioning as a **guide** and a **plate 5** to fix the external side of a cortical **bone** of the **bone cutting bone 4**. The **plate 3** and the **plate 5** are integrated and the part 6 which allows the insertion of the wire 1 of the plate 3 is set appropriately at two points but may be at one point or more than two points. The plate 3 and the plate 5 may be separated or integrated by inserting them into each other or screwing them down. The steel wire 1 is less in invasion than the plate 3. So, even when an inserting point is not proper, the reinsertion of the wire less affects the **bone cutting bone 2**. In addition, when the steel wire 1 is pulled off up to the cortical bone on the opposite side, the height from a joint face is measured easily.

25/5/3 (Item 3 from file: 350) [Links](#)

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0015472678 *Drawing available*

WPI Acc no: 2005-810503/200582

Related WPI Acc No: 2003-679190

XRPX Acc No: N2005-672064

Cutting guide assembly for resectioning distal end of femur, has cutting guide which moves relatively to arm assembly, to position against lateral or medial aspect of femur in which alignment element is held in intramedullary femoral canal

Patent Assignee: COON T M (COON-I); SMUCKER D M (SMUC-I); TRIA A J (TRIA-I); VAN ZILE R R (VZIL-I)

Inventor: COON T M; SMUCKER D M; TRIA A J; VAN ZILE R R

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050273115	A1	20051208	US 2002361990	P	20020305	200582	B
			US 2003377068	A	20030228		
			US 2005198453	A	20050804		

Priority Applications (no., kind, date): US 2003377068 A 20030228; US 2002361990 P 20020305; US 2005198453 A 20050804

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050273115	A1	EN	24	26	Related to Provisional	US 2002361990
					Division of application	US 2003377068

Alerting Abstract US A1

NOVELTY - An arm assembly (60) engaged to cutting guide (149), has a stylus arm (135) extending from engagement unit. An alignment element (144) is disposed at 90-100(deg) to stylus arm. The cutting guide moves relatively to the arm assembly, to position against lateral or medial aspect of femur in which alignment element is positioned in prepared intramedullary femoral canal.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

1. sizer guide for femur;
2. sizer guide integrated with guide pin;
3. resection guide; and
4. resectioning method of distal end of femur.

USE - For use in resectioning distal end of femur in total knee arthroplasty.

ADVANTAGE - Permits performing resectioning of both the proximal end of the tibia and distal end of the femur either medially or laterally. Performs total knee arthroplasty, with minimal cutting of soft tissues such as muscles,

tendons and ligaments.

DESCRIPTION OF DRAWINGS - The figure shows a perspective view of the femoral cutting guide assembly.

60 arm assembly

135 stylus arm

144 alignment element

149 cutting guide

154 plate

Title Terms /Index Terms/Additional Words: CUT; GUIDE; ASSEMBLE; DISTAL; END; FEMUR; MOVE; RELATIVELY; ARM; POSITION; LATERAL; MEDIAN; ASPECT; ALIGN; ELEMENT; HELD; INTRAMEDULLARY; CANAL

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/15			Main		"Version 7"

US Classification, Issued: 606088000, 606087000

File Segment: EngPI; ;

DWPI Class: P31

25/5/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0015450265 *Drawing available*

WPI Acc no: 2006-010134/200601

XRPX Acc No: N2006-008966

Bone shortening method for use in osteotomy, involves removing excessive bone, after slightly releasing fixation screw, and forcing temporary loosened bone to contact with counterpart with fully coinciding bone end surfaces

Patent Assignee: TELLMAN L (TELL-I); TRUMBLE T E (TRUM-I)

Inventor: TELLMAN L; TRUMBLE T E

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050277941	A1	20051215	US 2004854892	A	20040527	200601	B

Priority Applications (no., kind, date): US 2004854892 A 20040527

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20050277941	A1	EN	23	10	

Alerting Abstract US A1

NOVELTY - A fixation device (1) is applied to surface of bone (B) just above area of excision. Holes (4) in dimension suitable for screws (2) are drilled on bone, to fix device to bone surface by screws. An excessive bone is removed using saw blade, after slightly releasing the screw, and bone end surfaces are forced together, so that temporary loosened bone is forced into contact with counterpart with fully coinciding end surfaces.

DESCRIPTION - An INDEPENDENT CLAIM is also included for bone shortening device.

USE - For shortening bone of elbow, knee and ankle, in surgical osteotomy. Also for treating deformities and disorders of distal radial lunar joint.

ADVANTAGE - Optimizes healing of bone, by preventing loss of alignment.

DESCRIPTION OF DRAWINGS - The figure shows the perspective view of the fixation device used in osteotomy.

1 fixation device

2 screws

4 holes

13a,13b cavities

B bone

Title Terms /Index Terms/Additional Words: BONE; SHORTENING; METHOD; OSTEOTOMY; REMOVE; EXCESS; AFTER; SLIGHT; RELEASE; FIX; SCREW; FORCE; TEMPORARY; LOOSE; CONTACT; COUNTERPART; COINCIDE; END; SURFACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/32			Main		"Version 7"

US Classification, Issued: 606079000

File Segment: EngPI; ;

DWPI Class: P31

25/5/8 (Item 8 from file: 350) [Links](#)

Derwent WPIX

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0013502748 *Drawing available*

WPI Acc'no: 2003-595282/

XRPX Acc No: N2003-474308

Method for fixing middle foot department at treating fractures and deformations of foot bones

Patent Assignee: BEIDIK O V (BEID-I)

Inventor: BEIDIK O V; GABATKIN A I; LEVCHENKO K K; LYUBITSKII A P; TSYPLAKOV A YU

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
RU 2207818	C2	20030710	RU 2001119875	A	20010717	200356	B

Priority Applications (no., kind, date): RU 2001119875 A 20010717

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
RU 2207818	C2	RU	0	1	

Alerting Abstract RU C2

NOVELTY - One should fix external perosseous apparatus on foot bones, on anterior foot department, in particular. Then one should introduce cantilever threading screw-rod in frontal plane from inside outwards, from the top downwards into wedge-shaped bones through the point corresponding to the middle of medial wedge-shaped bone before rod's point is inserted into opposite cortical **plate** of lateral wedge- **shaped bone**. Position of anterior foot department is controlled by dosed shift of apparatus supporting elements. The present method enables to increase accuracy for controlling anterior foot department and improve fixation rigidity.

USE - Medicine, surgery.

ADVANTAGE - Higher efficiency. 4 dwg, 1 ex

Title Terms /Index Terms/Additional Words: METHOD; FIX; MIDDLE; FOOT; DEPARTMENT; TREAT; FRACTURE; DEFORM; BONE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"
A61B-017/66			Secondary		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

25/5/13 (Item 13 from file: 350) [Links](#)

Derwent WPIX

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0005676382 *Drawing available*

WPI Acc no: 1991-287852/

XRPX Acc No: N1991-220323

Intramedullary rod screw guide - has lateral spacer plate and guide forming passage aligned with bone screw passage

Patent Assignee: ACE ORTHOPEDIC MFG (ACEO-N)

Inventor: SOHNGEN G W

Patent Family (2 patents, 16 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5047034	A	19910910	US 1990529529	A	19900529	199139	B
WO 1991019468	A	19911226	WO 1991US3684	A	19910524	199203	E

Priority Applications (no., kind, date): US 1990529529 A 19900529

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
WO 1991019468	A	EN			
National Designated States,Original	CA JP				
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IT LU NL SE				

Alerting Abstract US A

The guide comprises elements for attaching the guide to an external support assembly during installation of an intramedullary rod. A laterally extending spacer plate, cooperates with intramedullary rod attachments proximate the distal end of the spacer plate and guides secured to the spacer plate intermediate the proximal and distal ends. The guide forms a passage which, in use, is aligned with the bone screw passage in the intramedullary rod permitting the guided insertion of a **drill and bone** screw insertion element through the guide passage in alignment with the bone screw passage in the intramedullary rod.

USE - An intramedullary **rod screw guide** for use in orthopedic surgical procedures involving the installation of an intramedullary rod.

Title Terms /Index Terms/Additional Words: INTRAMEDULLARY; ROD; SCREW; GUIDE; LATERAL; SPACE; PLATE; FORMING; PASSAGE; ALIGN; BONE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61F-005/04			Main		"Version 7"

US Classification, Issued: 606087000, 606096000

File Segment: EngPI; ;

DWPI Class: P32

25/5/14 (Item 14 from file: 350) [Links](#)

Derwent WPIX

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0005361344 *Drawing available*

WPI Acc no: 1990-360824/199048

Related WPI Acc No: 1992-166341

XRPX Acc No: N1990-275364

Surgical method for fixation of osteoporotic bone - has guide pin used for drilling to enlarge cavity to be treated

Patent Assignee: SCHOLTEN A (SCHO-I)

Inventor: REILEY M A; SCHOLTEN A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4969888	A	19901113	US 1989308724	A	19890209	199048	B

Priority Applications (no., kind, date): US 1989308724 A 19890209

Alerting Abstract US A

The method includes a series of steps including penetrating the bone having the fracture with a guide pin, drilling the osteoporotic bone marrow of the bone to enlarge the cavity to be treated, following which a bone specific inflatable device is inserted in the cavity and inflated. The expansion of the device causes a compacting of the osteoporotic bone marrow against the inner surface of the outer wall of the bone to be treated to further enlarge the cavity.

When this occurs, a flowable synthetic bone material or methyl methacrylate cement is directed into the cavity and allowed to set to a hardened condition.

ADVANTAGE - Reduced patient discomfort. @(17pp Dwg.No.28/31)@

Title Terms /Index Terms/Additional Words: SURGICAL; METHOD; FIX ; BONE; GUIDE; PIN; DRILL; ENLARGE; CAVITY; TREAT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Secondary		"Version 7"

US Classification, Issued: 606094000, 606060000, 606095000

File Segment: EngPI; ;

DWPI Class: P31

25/5/19 (Item 19 from file: 350) [Links](#)

Derwent WPIX

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0002193547

WPI Acc no: 1981-A1772D/

Apparatus for guiding pins through body tissue - has bracket with centring aperture, guide tube with L-piece and spring pressing guide tube to body

Patent Assignee: TRAUMATOLOGY ORTHOP (TRAU-R)

Inventor: KATANSKIY Y U N; OGANESYAN O V; SOLOVYOVA N V

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
SU 733669	B	19800525	SU 2538534	A	19771017	198102	B

Alerting Abstract SU B

The equipment for guiding pins has a body (1) adjustably linked to a bracket with pin centring aperture. To avoid lesion of main blood vessels and nerves as the pin passes through the limb, the equipment also contains a guide tube (2) with L-piece (4) fixed in the body's groove and a fastening device in the form of an axis (7) with a spring (8) and plate (9) pressing the guide tube to the body. A rib in the tube's outer surface fits in the body groove to prevent rotation.

Equipment is pre-set for limb dimensions by moving the bracket in the body. The tube with L-piece enters the pin introduction site, bluntly moving muscles, vessels and nerves aside until it lodges in the **bone**. After **removing** the L-piece, the pin enters the tube until it lodges in the bone, through which it is brought by drill and centred by the bracket aperture.

Then the equipment is removed, using the split in the tube. Bul.18/15.5.80.

Title Terms /Index Terms/Additional Words: APPARATUS; GUIDE; PIN ; THROUGH; BODY; TISSUE; BRACKET; CENTRE; APERTURE; TUBE; PIECE; SPRING; PRESS

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/18			Secondary		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

25/5/20 (Item 1 from file: 347) [Links](#)

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06293761 ****Image available****

ENDOPROSTHESIS FOR AT LEAST PARTIAL REPLACEMENT OF TIBIA

Pub. No.: 11-235353 [JP 11235353 A]

Published: August 31, 1999 (19990831)

Inventor: KELLER ARNOLD

Applicant: GMT G FUER MEDIZINISCHE TECHNIK GMBH

WALDEMAR LINK GMBH & CO KG

Application No.: 10-345987 [JP 98345987]

Filed: December 04, 1998 (19981204)

Priority: 19754079 [DE 19754079], DE (Germany), December 05, 1997 (19971205)

International Class: A61F-002/38

ABSTRACT

PROBLEM TO BE SOLVED: To enable transplantation of an endoprosthesis when a part of a tibia or the whole of the **tibia** must be **removed** by fixing the **tibia** flat part of an artificial cranial bone of knee joint, and arranging a connecting part supported by a natural foot joint in the lower end part.

SOLUTION: An endoprosthesis is substantially composed of a bar body 1, the connecting part 2 for a foot joint 3 and the fixing part 4 for the shinbone flat part 5 of an artificial cranial bone of knee joint 6 to which an artificial cranial bone of a femur is connected in the opposite direction of the flat part of the tibia 5. The recessed part is formed in the upper end part facing the flat part of the tibia of the bar body 1. A **pin** is **guided** in the recessed part so that this is fixed on the under surface facing the bar body 1 of the flat part of the tibia 5. The connecting part 2 is composed of a curved **plate** body 16 to be fixed to the lower end part 11 of the bar body. The **plate** body 16 closes the fitting part downward in the direction of the foot joint 3 so that the curved **plate** body 26 is fixed to this lower end part.

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27/5/3 (Item 3 from file: 350) [Links](#)

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0015248037 *Drawing available*

WPI Acc no: 2005-598122/200561

XRPX Acc No: N2005-490761

Percutaneous fixation device for fractured femoral bone, has fixing plate having through-hole with shoulder to receive handle having guide holes for drilling holes for fixing screws

Patent Assignee: HOEGSTROEM M (HOEG-I)

Inventor: HOEGSTROEM M

Patent Family (3 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2005082263	A1	20050909	WO 2005SE240	A	20050222	200561	B
SE 200400470	A	20050827	SE 2004470	A	20040226	200568	E
SE 526560	C2	20051011	SE 2004470	A	20040226	200568	E

Priority Applications (no., kind, date): SE 2004470 A 20040226

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
WO 2005082263	A1	EN	17	4	
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW				
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				
SE 200400470	A	SV			
SE 526560	C2	SV			

Alerting Abstract WO A1

NOVELTY - The fixing device consists of a plate (1) having a head (2) angled corresponding to the angle between the bones. The head (2) has a through hole (7) with a shoulder (8) to receive detachably a handle having guide holes for **drilling** holes in the **bone** corresponding to holes (5) in the plate (1) for the screws (6) for fixing the plate to the bone.

DESCRIPTION - The handle has a through hole along its length angled relative to its longitudinal axis for drilling holes for the fixing screws and guiding the fixing screws. The handle had a through hole extending along its longitudinal axis to receive a guide pin. A drill is inserted coaxial to the guide pin while drilling the fixing holes. A

guide sleeve is inserted into the axial hole of the handle to **guide** the fixing screws. The side of the **plate** abutting the bone is curved to fit the contour of the bone. The **plate** has an adjustor for adjusting angle between the plate and handle. The test end of the plate is tapered into a point or squared off to form a nose.

USE - For fixing fractured femural bone of hip joint.

ADVANTAGE - Reduces size of incision to be made and prevents damage of the bone. Is compatible for verification by fluoroscopy. Ensures stable fixation. Reduces amount of bleeding during surgery. Reduces risk of post surgical infection. Ensures quick healing.

DESCRIPTION OF DRAWINGS - The figures show the plan view, a sectional view, a side view and the top view of the sliding screw of fixation device of fractured femural bone.

1 fixing plate

2 head of plate

5 fixing screw hole

7 hole for receiving guide handle

8 shoulder of hole

Title Terms /Index Terms/Additional Words: PERCUTANEOUS; FIX; DEVICE; FRACTURE; BONE; PLATE; THROUGH; HOLE; SHOULDER; RECEIVE; HANDLE; GUIDE; DRILL; SCREW

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/74			Main		"Version 7"
A61B-017/88			Secondary		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

27/5/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0015108330 *Drawing available*

WPI Acc no: 2005-457809/200546

XRPX Acc No: N2005-372227

Compression plate for use during treatment of fractured fragment, has interference screw with specific screw whose path is different to allow interference screw to be fitted between plate and blade of plate

Patent Assignee: DA FROTA CARRERA E (CARR-I)

Inventor: DA FROTA CARRERA E

Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050143736	A1	20050630	US 2004960470	A	20041007	200546	B

BR 200304144	A	20050531	BR 20034144	A	20031008	200546	E
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Priority Applications (no., kind, date): BR 20034144 A 20031008

Patent Details						
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050143736	A1	EN	8	12		
BR 200304144	A	PT	1	0		

Alerting Abstract US A1

NOVELTY - The plate (1) has a plate (4) with holes for cortical and/or spongy bone screws, and an oblong hole for an interference screw (2). Four small orifices are located in parallel on the plate (4), to which a guide for introduction of the screw is coupled. The screw has a specific screw (7), whose path is different to allow the screw (2) to be fitted between the plate (4) and a blade of the plate (1).

USE - Used for fixing fractured bones during treatment of a fractured fragment.

ADVANTAGE - The interference screw promotes more stable fixing of the plate and fractured bone when the interference screw is tightened.

DESCRIPTION OF DRAWINGS - The drawing shows a side view of a compression plate.

1 Compression plate

2 Interference screw

4 Plate

5 Oblong hole

7 Specific screw

Title Terms /Index Terms/Additional Words: COMPRESS; PLATE; TREAT; FRACTURE; FRAGMENT; INTERFERENCE; SCREW; SPECIFIC; PATH; ALLOW; FIT; BLADE

Class Codes

International Patent Classification					
IPC	Class Level	Scope	Position	Status	Version Date
A61F-002/28; A61F-002/30			Main		"Version 7"

US Classification, Issued: 606060000

File Segment: EngPI; ;

DWPI Class: P32

27/5/5 (Item 5 from file: 350) [Links](#)

Derwent WPIX

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0014885853 *Drawing available*

WPI Acc no: 2005-233594/200524

XRPX Acc No: N2005-192432

Surgical tool for aligning fixation apparatus incident to repair of human limb bones has guide wire that is inserted along the resolved course and across the fracture faces of the bone through an alignment conduit in the clamp

Patent Assignee: FEILER F C (FEIL-I)

Inventor: FEILER F C; ROTMAN M B

Patent Family (2 patents, 94 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2005027759	A1	20050331	WO 2003US26380	A	20030822	200524	B
AU 2003260012	A1	20050411	AU 2003260012	A	20030822	200540	E
			WO 2003US26380	A	20030822		

Priority Applications (no., kind, date): WO 2003US26380 A 20030822

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2005027759	A1	EN	30	13		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
AU 2003260012	A1	EN			PCT Application	WO 2003US26380
					Based on OPI patent	WO 2005027759

Alerting Abstract WO A1

NOVELTY - A limb is placed in a stabilizing clamp. A guide wire (32) is inserted along the resolved course and across the fracture faces of the bone through an alignment conduit in the clamp. A pilot hole is **drilled** in the **bone** through the fracture faces by directing a cannulated drill over the guide wire. A fastening screw is introduced in the drilled pilot hole.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a percutaneous internal fixing method for fractured limb bone.

USE - For aligning fixation apparatus incident to repair or fusion of human limb bones.

ADVANTAGE - Leads to good apposition of the bone fragments and an overall improved result, including the

minimization of surgical exposure of the wrist. Allows a less experienced hand surgeon or an orthopedist to fix a scaphoid fracture with a lag screw for aligning fixation apparatus incident to repair of human limb bones
DESCRIPTION OF DRAWINGS - The figure shows a side view of the clamping apparatus.

3 Lower surface
 4 Palmar jaw
 5 Superior surface
 16 Scaphoid bone
 32 Guide wire

Title Terms /Index Terms/Additional Words: SURGICAL; TOOL; ALIGN ; FIX; APPARATUS; INCIDENT; REPAIR; HUMAN; LIMB; BONE; GUIDE; WIRE; INSERT; RESOLUTION; COURSE; FRACTURE; FACE; THROUGH; CONDUIT; CLAMP

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"

File Segment: EngPI; ;
 DWPI Class: P31

27/5/6 (Item 6 from file: 350) [Links](#)

Derwent WPIX

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0014804230 *Drawing available*

WPI Acc no: 2005-151916/

Related WPI Acc No: 1993-008411; 1994-340531; 1996-150600; 1996-496765; 1998-206434; 2000-255673; 2004-666345

XRPX Acc No: N2005-128180

Internal fixation of spine to facilitate graft fusion involves inserting fixation plate into subcutaneous suprafascial space of dissected skin and clamping fixation plate to the bone screws using nuts

Patent Assignee: MATHEWS H H (MATH-I)

Inventor: MATHEWS H H

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050038434	A1	20050217	US 1992852577	A	19920317	200516	B
			US 1992938708	A	19920901		
			US 1993116351	A	19930902		
			US 1995437523	A	19950509		
			US 1996677135	A	19960709		
			US 199842910	A	19980317		

			US 2000519295	A	20000306		
			US 2004933155	A	20040902		

Priority Applications (no., kind, date): US 2000519295 A 20000306; US 199842910 A 19980317; US 1996677135 A 19960709; US 1995437523 A 19950509; US 1993116351 A 19930902; US 1992938708 A 19920901; US 1992852577 A 19920317; US 2004933155 A 20040902

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050038434	A1	EN	9	4	Division of application	US 1992852577
					Continuation of application	US 1992938708
					Continuation of application	US 1993116351
					Division of application	US 1995437523
					Continuation of application	US 1996677135
					Continuation of application	US 199842910
					Continuation of application	US 2000519295
					Division of patent	US 5171279
					Division of patent	US 5569248
					Continuation of patent	US 5728097
					Continuation of patent	US 6033406
					Continuation of patent	US 6793656

Alerting Abstract US A1

NOVELTY - The method involves making an incision in the skin for allowing the entry of each guide pin into the pedicle of at least two vertebrae (10). The subcutaneous suprafascial tissue between each entry site is dissected for the advancement of a bone screw over the **guide pin**. A fixation **plate** (40) is inserted into the subcutaneous suprafascial space and clamped to the bone screws (30) using nuts (42).

DESCRIPTION - **DEPENDENT CLAIMS** are also included for the following:

- Bone screw; and
- Three-component dilator system.

USE - Used for graft fusion operation.

ADVANTAGE - Performs a minimally invasive surgery that minimizes health risk to the patient.

DESCRIPTION OF DRAWINGS - The figure is a posterior view of a spinal column after implantation procedure.

10 Vertebrae

30 Bone screws

40 Fixation plate

42 Nuts

44 Linking portion

Title Terms /Index Terms/Additional Words: INTERNAL; FIX; SPINE; FACILITATE; GRAFT; FUSE; INSERT;

PLATE; SUBCUTANEOUS; SPACE; DISSECT; SKIN; CLAMP; BONE; SCREW; NUT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61F-005/04			Main		"Version 7"
A61B-017/56; A61F-002/30			Secondary		"Version 7"

US Classification, Issued: 606061000, 606060000, 606053000

File Segment: EngPI; ;

DWPI Class: P31; P32

27/5/8 (Item 8 from file: 350) [Links](#)

Derwent WPIX

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0014203634 *Drawing available*

WPI Acc no: 2004-389248/

Related WPI Acc No: 2001-273639; 2002-041019

XRPX Acc No: N2004-309844

Bone fixation system for securing plate to spinal column, has guide members, each having offset portion spacing end of slot from adjacent edge of hole formed through guide member such that screw is spaced with distance from one end of slot

Patent Assignee: BURD B A (BURD-I); FOLEY K T (FOLE-I); NEEDHAM D A (NEED-I)

Inventor: BURD B A; FOLEY K T; NEEDHAM D A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040097950	A1	20040520	US 1999417402	A	19991013	200436	B
			US 2001907022	A	20010717		
			US 2003643878	A	20030820		

Priority Applications (no., kind, date): US 2001907022 A 20010717; US 1999417402 A 19991013; US 2003643878 A 20030820

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040097950	A1	EN	40	30	C-I-P of application	US 1999417402
					Division of application	US 2001907022

				C-I-P of patent	US 6533786
				Division of patent	US 6692503

Alerting Abstract US A1

NOVELTY - The system (30) has a drill guide having two guide members, each with an offset portion adjacent distal end of guide member positionable in one of two slots (32,35) in a plate (31) against one end of the slot. Each offset portion spaces the end of slot from an adjacent edge of a hole (34) formed through guide member such that a screw (50) inserted into hole through slot is spaced a distance from one end of slot.

DESCRIPTION - The two guide members of the drill guide extend from a handle. Each guide member has a passage opening at a distal end of the corresponding guide. **INDEPENDENT CLAIMS** are also included for the following:

- A. a drill guide; and
- B. a method for securing plate to a portion of spinal column

USE - For securing plate to spinal column or vertebra.

ADVANTAGE - Allows compression and extension of bone segment to which the plate is attached after screws are inserted. Allows screws to accommodate extension and post-operative settling of spinal column segment when surgeon selectively applies either a compression or distraction load to spinal column segment with the plate secured to the spinal column segment by bone engaging screws.

DESCRIPTION OF DRAWINGS - The figure shows the top perspective view of a bone fixation system.

30Bone fixation system

31Plate

32,35Slots

34Hole

50Screw

Title Terms /Index Terms/Additional Words: BONE; FIX; SYSTEM; SECURE; PLATE; SPINE; COLUMN; GUIDE; MEMBER; OFFSET; PORTION; SPACE; END; SLOT; ADJACENT; EDGE; HOLE; FORMING; THROUGH; SCREW; DISTANCE; ONE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606096000

File Segment: EngPI; ;
DWPI Class: P31

27/5/11 (Item 11 from file: 350) [Links](#)
Derwent WPIX

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0009369104 *Drawing available*

WPI Acc no: 1999-302878/199925

XRPX Acc No: N1999-226907

Bone plate for assisting with surgical arthrodesis of two or more bones

Patent Assignee: BRAY R S (BRAY-I)

Inventor: BRAY R S

Patent Family (5 patents, 82 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1999021502	A1	19990506	WO 1998US22472	A	19981023	199925	B
AU 199911965	A	19990517	AU 199911965	A	19981023	199939	E
EP 1027005	A1	20000816	EP 1998955074	A	19981023	200040	E
			WO 1998US22472	A	19981023		
US 6235034	B1	20010522	US 199763035	P	19971024	200130	E
			US 1998177885	A	19981023		
AU 753521	B	20021017	AU 199911965	A	19981023	200280	E

Priority Applications (no., kind, date): US 1998177885 A 19981023; US 199763035 P 19971024

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1999021502	A1	EN	34	14		
National Designated States,Original	AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Regional Designated States,Original	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 199911965	A	EN			Based on OPI patent	WO 1999021502
EP 1027005	A1	EN			PCT Application	WO 1998US22472
					Based on OPI patent	WO 1999021502
Regional Designated States,Original	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
US 6235034	B1	EN			Related to Provisional	US 199763035
AU 753521	B	EN			Previously issued patent	AU 9911965
					Based on OPI patent	WO 1999021502

Alerting Abstract WO A1

NOVELTY - The bone plate (10) comprises a base plate (14) having screw holes (18), and bone screws (16) for securing the bone plate to a bone by insertion through the screw holes into the bone. The bone screws have heads

(28) shaped to toggle within the screw holes. A retaining plate (20) is fixed to the base plate. The retaining plate covers the bone screws. The retaining plate, and base plate each contain set screw apertures (24,26).

DESCRIPTION - A set screw (22) retains the retaining plate in place over the base plate by screwing the set screw through the set screw apertures in the retaining plate, and base plate.

INDEPENDENT CLAIMS are also included for a bone screw guide mechanism.

USE - For fusing bones together e.g. in the spinal column.

ADVANTAGE - This design prevents the bone screw from backing out from the bone once screwed in through the base plate.

DESCRIPTION OF DRAWINGS - The drawing shows a side cross-sectional view of the bone screw locking mechanism.

10 bone plate

14 Base plate

16 Bone screws

18 Screw holes

20 Retaining plate

22 Set screw

24,26 Set screw apertures

28 Heads

Title Terms /Index Terms/Additional Words: BONE; PLATE; ASSIST; SURGICAL; TWO; MORE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56; A61B-017/80			Main		"Version 7"

US Classification, Issued: 606071000, 606061000, 606070000

File Segment: EngPI; ;

DWPI Class: P31

27/5/12 (Item 12 from file: 350) [Links](#)

Derwent WPIX

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0009064811 *Drawing available*

WPI Acc no: 1998-260375/199823

Related WPI Acc No: 1999-346939

XRPX Acc No: N1998-205312

Osteosynthetic implant for setting broken bone - comprises nail having number of helically twisted blades, cannulation runs through centre of nail to receive guide wire

Patent Assignee: KULTHENS AG (KULT-N); SYNTHES AG (SYNT-N); SYNTHES USA (SYNT-N)

Inventor: BRESINA S; BRESINA S J

Patent Family (13 patents, 24 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 5741256	A	19980421	US 1997782231	A	19970113	199823	B
WO 1998030164	A1	19980716	WO 1997EP6863	A	19971209	199834	E
AU 199857551	A	19980803	AU 199857551	A	19971209	199850	E
EP 961587	A1	19991208	EP 1997953762	A	19971209	200002	E
			WO 1997EP6863	A	19971209		
AU 712089	B	19991028	AU 199857551	A	19971209	200005	E
CN 1244105	A	20000209	CN 1997181278	A	19971209	200026	E
TW 391874	A	20000601	TW 1997117645	A	19971125	200060	E
JP 2001507965	W	20010619	WO 1997EP6863	A	19971209	200140	E
			JP 1998530494	A	19971209		
EP 961587	B1	20031001	EP 1997953762	A	19971209	200365	E
			WO 1997EP6863	A	19971209		
DE 69725342	E	20031106	DE 69725342	A	19971209	200381	E
			EP 1997953762	A	19971209		
			WO 1997EP6863	A	19971209		
ES 2207761	T3	20040601	EP 1997953762	A	19971209	200437	E
CN 1158974	C	20040728	CN 1997181278	A	19971209	200626	E
CA 2276290	C	20070109	CA 2276290	A	19971209	200707	E
			WO 1997EP6863	A	19971209		

Priority Applications (no., kind, date): US 1997782231 A 19970113

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 5741256	A	EN	9	6		
WO 1998030164	A1	EN				
National Designated States,Original	AU CA CN JP					
Regional Designated States,Original	AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
AU 199857551	A	EN			Based on OPI patent	WO 1998030164
EP 961587	A1	EN			PCT Application	WO 1997EP6863
					Based on OPI patent	WO 1998030164
Regional Designated States,Original	AT BE CH DE ES FR GB IT LI NL SE					
AU 712089	B	EN			Previously issued patent	AU 9857551
					Based on OPI patent	WO 1998030164

TW 391874	A	ZH				
JP 2001507965	W	JA	22		PCT Application	WO 1997EP6863
					Based on OPI patent	WO 1998030164
EP 961587	B1	EN			PCT Application	WO 1997EP6863
					Based on OPI patent	WO 1998030164
Regional Designated States,Original	AT BE CH DE ES FR GB IT LI NL SE					
DE 69725342	E	DE			Application	EP 1997953762
					PCT Application	WO 1997EP6863
					Based on OPI patent	EP 961587
					Based on OPI patent	WO 1998030164
ES 2207761	T3	ES			Application	EP 1997953762
					Based on OPI patent	EP 961587
CA 2276290	C	EN			PCT Application	WO 1997EP6863
					Based on OPI patent	WO 1998030164

Alerting Abstract US A

The implant comprises a nail for implantation in a bone fragment. The nail has two blades which are helically twisted along two coaxial helixes respectively. The coaxial helixes are less than 180 degrees out of phase. The second blade is tapered and has a distal portion that is wider than the proximal portion. Also included is a securing member which is connected to an elongate portion of the bone, the nail being engageable to the securing member. The helixes are out of phase preferably by between 60 degrees and 120 degrees. The second blade is twisted by about 90 degrees and the nail may be implanted such that the proximal width of the second blade is parallel to the elongate portion of the bone.

USE - For surgical bone setting purposes.

ADVANTAGE - Does not have a tendency to cut through the bone when set in place.

Title Terms /Index Terms/Additional Words: IMPLANT; SET; BREAK; BONE; COMPRISE; NAIL; NUMBER; HELICAL; TWIST; BLADE; CANNULA; RUN; THROUGH; CENTRE; RECEIVE; GUIDE; WIRE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58; A61B-017/74; A61F-002/36			Main		"Version 7"
A61B-0017/58	A	I	F	R	20060101
A61B-0017/74	A	I		R	20060101
A61B-0017/78	A	I		R	20060101
A61B-0017/58	C	I	F	R	20060101
A61B-0017/68	C	I		R	20060101

US Classification, Issued: 606062000, 606067000

File Segment: EngPI; ;
DWPI Class: P31; P32

27/5/13 (Item 13 from file: 350) [Links](#)

Derwent WPIX

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0007679193 *Drawing available*

WPI Acc no: 1996-300265/199630

XRPX Acc No: N1996-252714

Blade plate having guide and template for determining optimum angle of blade prior to insertion to bone - has centrally bent portion with guide pipe and blade plate provided on both ends and guide wires allowing for advancing of blades

Patent Assignee: YAMADA I (YAMA-I)

Inventor: YAMADA I

Patent Family (3 patents, 21 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1996017556	A1	19960613	WO 1995JP2533	A	19951211	199630	B
JP 8154946	A	19960618	JP 1994335182	A	19941209	199634	E
AU 199641239	A	19960626	AU 199641239	A	19951211	199641	E

Priority Applications (no., kind, date): JP 1994335182 A 19941209

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 1996017556	A1	JA	16	13		
National Designated States,Original	AU CA NZ US					
Regional Designated States,Original	AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
JP 8154946	A	JA	3	4		
AU 199641239	A	EN			Based on OPI patent	WO 1996017556

Alerting Abstract WO A1

The template and a blade plate (15) are formed by a blade portion and a plate portion prior to insertion. A template (17) is provided centrally of with a bent portion (18), and on both ends of an upper plate portion (19) with a guide pipe (20), and a blade plate (24) is provided on both ends of a blade portion (25) with a guide pipe (26).

The template (17) of the invention can determine an optimum angle (16) formed by the blade portions and the plate portions, which results in significant buttress effects. The blade plate (24) of the invention can provide precise insertion since the guide pipe (26) has a certain length and the advancing direction of the blade plate does not

deviate from **guide wires**. Further, the use of two **guide wires** (21) prevents the blade **plate** from revolving.
ADVANTAGE - Enables insertion into a predetermined, precise position without causing deviation in the direction of entry and revolving.

Title Terms /Index Terms/Additional Words: BLADE; PLATE; GUIDE; TEMPLATE; DETERMINE; OPTIMUM; ANGLE; PRIOR; INSERT; BONE; CENTRAL; BEND; PORTION; PIPE; END; WIRE; ALLOW; ADVANCE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"
A61B-0017/80	A	I		R	20060101
A61B-0017/68	C	I		R	20060101

File Segment: EngPI; ;
DWPI Class: P31

27/5/15 (Item 15 from file: 350) [Links](#)

Derwent WPIX

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0007151241 *Drawing available*

WPI Acc no: 1995-187644/

XRPX Acc No: N1995-146978

Support plate assembly for fractured bone, e.g. trochanter - comprises first plate shaped to engage against bone surface, engaged by second plate with shaft penetrating bone through aperture

Patent Assignee: FLEURIAU-CHATEAU J (FLEU-I)

Inventor: FLEURIAU-CHATEAU J

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
FR 2712173	A1	19950519	FR 199313466	A	19931110	199525	B

Priority Applications (no., kind, date): FR 199313466 A 19931110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
FR 2712173	A1	FR	13	3	

Alerting Abstract FR A1

A trochanter plate (11) engages between the exterior surface of the femur and a second plate component (6) of a plate and screw assembly (5). The second plate is shaped with a surface configuration complementary with the trochanter plate, and includes an inclined shaft (7) which passes through an aperture in the trochanter plate. Above the shaft, the second plate has a curved branch (14) with a hook-shaped end which is shaped to conform to the trochanter and engages against its surface by pressure. A further aperture in the trochanter plate, below that through which the shaft passes, receives a cortical fastening screw. Guide projections (16) at the lower end of the trochanter plate engage the lower end of the second plate.

ADVANTAGE - Prevents relative translational or pivotal movement between bone portions on either side of fracture.

Title Terms /Index Terms/Additional Words: SUPPORT; PLATE; ASSEMBLE; FRACTURE; BONE; TROCHANTER; COMPRISE; FIRST; SHAPE; ENGAGE; SURFACE; SECOND; SHAFT; PENETRATE; THROUGH; APERTURE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/78			Main		"Version 7"

File Segment: EngPI; ;

DWPI Class: P31

27/5/18 (Item 18 from file: 350) [Links](#)

Derwent WPIX

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0006909099 *Drawing available*

WPI Acc no: 1994-304183/199438

XRPX Acc No: N1994-239199

Surgical device for connecting fractured bones - has connector plate for screwed connection having femur shaft with sharpened button and can be inserted through small skin incision

Patent Assignee: GOTFRIED Y (GOTF-I)

Inventor: GOTFRIED Y

Patent Family (5 patents, 8 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 617927	A1	19941005	EP 1994302143	A	19940324	199438	B
US 5429641	A	19950704	US 1993170529	A	19931220	199532	E
IL 105183	A	19960723	IL 105183	A	19930328	199636	E
EP 617927	B1	19990120	EP 1994302143	A	19940324	199908	E
DE 69416020	E	19990304	DE 69416020	A	19940324	199915	E
			EP 1994302143	A	19940324		

Priority Applications (no., kind, date): IL 105183 A 19930328

Patent Details						
Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 617927	A1	EN	17	17		
Regional Designated States,Original	CH DE ES FR GB IT LI					
US 5429641	A	EN	15			
IL 105183	A	EN				
EP 617927	B1	EN				
Regional Designated States,Original	CH DE ES FR GB IT LI					
DE 69416020	E	DE			Application	EP 1994302143
					Based on OPI patent	EP 617927

Alerting Abstract EP A1

A bar-shaped connector plate (I) having an inner surface to be placed onto the bone, an outer surface, with a head portion and a bottom provided with a sharpened end (8) for its insertion through a small incision in the skin. The connector plate is provided in its lower portion with at least two countersunk with through-going bores (7) and in its upper portion with two adjoining oblique. Screw-threaded bores (5) of larger diameter directed in upward direction at an angle of about 130 degrees, are provided with a screw-threaded bore (3) perpendicular to the axis of the bar-shaped connector being provided in the head portion.

Two long screws (II), have a straight shaft (10), with a wood-screw-shaped inner end (11) for insertion into the fractured bone part and an outer end coaxially recessed (12) in hexagonal or other polygonal shape. The recess is continued by a screw-threaded bore (13) concentric with the shaft axis. The outer end portion of each the screw is positioned and movable in both axial and rotational direction in a sleeve (III) of shorter length than said screw. At least two shorter screws (33) secure the connector plate (I) to the femur shaft, extending through the straight bores (7) into the bone material.

ADVANTAGE - Facilitates and shorten the progress of the operation on the one hand, and hold the fractured parts in full alignment and under compression after their complete jointing, on the other. In addition, sufficient space is provided for axial sliding out of the connection screw.

Title Terms /Index Terms/Additional Words: SURGICAL; DEVICE; CONNECT; FRACTURE; BONE; PLATE; SCREW; FEMUR; SHAFT; SHARP; BUTTON; CAN; INSERT; THROUGH; SKIN; INCISION

Class Codes

International Patent Classification					
IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58; A61B-017/76			Main		"Version 7"
A61B-017/90; A61F-005/04			Secondary		"Version 7"

US Classification, Issued: 606067000, 606104000, 606096000, 606073000, 606069000, 411383000, 411410000

File Segment: EngPI; ;
DWPI Class: P31; P32

27/5/19 (Item 19 from file: 350) [Links](#)

Derwent WPIX

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0006205982 *Drawing available*

WPI Acc no: 1992-333440/199241

XRPX Acc No: N1992-254522

Bone plate assembly with through bore(s) and screw(s) - has bush fixed in bone aperture for securing bone fastening screw

Patent Assignee: LINK GMBH & CO WALDEMAR (LINS)

Inventor: KELLER A

Patent Family (6 patents, 8 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 507162	A1	19921007	EP 1992104908	A	19920320	199241	B
US 5234431	A	19930810	US 1992862221	A	19920402	199333	E
EP 507162	B1	19940309	EP 1992104908	A	19920320	199410	E
DE 59200082	G	19940414	DE 59200082	A	19920320	199416	E
			EP 1992104908	A	19920320		
ES 2051136	T3	19940601	EP 1992104908	A	19920320	199425	E
JP 2977662	B2	19991115	JP 199281972	A	19920403	199954	E

Priority Applications (no., kind, date): DE 19914025 U 19910403

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 507162	A1	DE	10			
Regional Designated States,Original	CH DE ES FR GB IT LI					
US 5234431	A	EN	8	9		
EP 507162	B1	DE	10	9		
Regional Designated States,Original	CH DE ES FR GB IT LI					
DE 59200082	G	DE			Application	EP 1992104908
					Based on OPI patent	EP 507162
ES 2051136	T3	ES			Application	EP 1992104908
					Based on OPI patent	EP 507162

JP 2977662	B2	JA	5	Previously issued patent	JP 05111495
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Alerting Abstract EP A1

The bone fixing assembly comprises a plate (3) contg. one or more **bore**s (2) through which **bone**s screws (1) pass. A bush (4), separate from the screw, is fixed in position in the bore aperture, and the screw is secured in place in it. It is pref. fixed in the plate at a preset angle, with the screw at the same angle. The bush can have a thread (12) at one end to take a nut (11), bearing against the plate at one side, while at the other end it has a flange (10) pressing against the other side.

ADVANTAGE - Easy screw insertion and better access to bone, the screw remaining at the same angle even if it works loose.

Title Terms /Index Terms/Additional Words: BONE; PLATE; ASSEMBLE ; THROUGH; BORE; SCREW; BUSH; FIX; APERTURE; SECURE; FASTEN

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56; A61B-017/58; A61F-005/04			Main		"Version 7"
A61F-002/44			Secondary		"Version 7"

US Classification, Issued: 606070000, 606061000, 606069000, 623017000

File Segment: EngPI; ;
DWPI Class: P31; P32

27/5/21 (Item 21 from file: 350) [Links](#)

Derwent WPIX

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0006041815 *Drawing available*

WPI Acc no: 1992-278462/

XRPX Acc No: N1992-212960

Bone fracture repair device - has three-bone guide for wire and screws, with sleeved drill be usable in one bore

Patent Assignee: BADRINATH K (BADR-I)

Inventor: BADRINATH K

Patent Family (3 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
GB 2252732	A	19920819	GB 199121930	A	19911016	199234	B
US 5207753	A	19930504	US 1992834893	A	19920211	199319	E

GB 2252732	B	19941116	GB 199121930	A	19911016	199443	E
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Priority Applications (no., kind, date): GB 199121930 A 19911016; GB 19913345 A 19910218; GB 19919623 A 19910503

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
GB 2252732	A	EN	29	24	
US 5207753	A	EN	12	24	

Alerting Abstract GB A

The device comprises a guide having three parallel elongate bores, two of which (15, 16) are small diameter for receiving a guide wire and one of which (14) is of larger diameter for receiving and guiding a screw. By employing a guide wire in a small diameter bore to locate the guide, screws can be inserted in substantially parallel disposition using the larger diameter bore as a guide and using the guide wire as a pivot to change the position for insertion of a screw.

A guide anchoring pin may be used to secure the guide against rotation. A drill (22) having a sleeve (24) may be employed in the bore (14). The sleeve has an outer diameter which permits a guiding fit in the bore and limits the cutting depth of the drill. At least one further elongate bore of smaller diameter may be provided.

Title Terms /Index Terms/Additional Words: BONE; FRACTURE; REPAIR; DEVICE; THREE; GUIDE; WIRE; SCREW; SLEEVE; DRILL; ONE; BORE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56; A61F-002/32			Main		"Version 7"
B23B-047/28			Secondary		"Version 7"

US Classification, Issued: 606096000

File Segment: EngPI; ;
DWPI Class: P31; P32; P54

27/5/22 (Item 22 from file: 350) [Links](#)

Derwent WPIX

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0005740863 *Drawing available*

WPI Acc no: 1991-355566/

XRPX Acc No: N1991-272137

Spinal fracture repair plate - shaped to fit over bone and made with screw hole and bush for self-tapping screw which fixes bone fragments together

Patent Assignee: VICHARD O (VICH-I)

Inventor: VICHARD O

Patent Family (6 patents, 6 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 459266	A	19911204	EP 1991108144	A	19910521	199149	B
FR 2662349	A	19911129	FR 19906672	A	19900523	199207	E
EP 459266	A3	19911227	EP 1991108144	A	19910521	199312	E
US 5318567	A	19940607	US 1991724828	A	19910702	199422	NCE
			US 1992963942	A	19921020		
EP 459266	B1	19941221	EP 1991108144	A	19910521	199504	E
DE 69106045	E	19950202	DE 69106045	A	19910521	199510	E
			EP 1991108144	A	19910521		

Priority Applications (no., kind, date): US 1992963942 A 19921020; FR 19906672 A 19900523

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 459266	A	EN				
Regional Designated States,Original	AT CH DE GB LI SE					
EP 459266	A3	EN				
US 5318567	A	EN	6		Continuation of application	US 1991724828
EP 459266	B1	FR	7			
Regional Designated States,Original	AT CH DE GB LI SE					
DE 69106045	E	DE			Application	EP 1991108144
					Based on OPI patent	EP 459266

Alerting Abstract EP A

The spinal fracture repair plate, is shaped to fit over the surface of the caudal fragment (2), made with a central hole for a self-tapping screw (12) which joins the caudal and cranial sections of the bone.

The screw hole is made in a portion of the plate which acts as a support for the screw head so that it does not penetrate the bone, and is surrounded by a bush which lies in line with the axis of the bone fragment. The plate has a curved section which is designed to conform to the surface of the third cervical vertebra.

USE/ADVANTAGE - Especially for compressing and consolidating the fragments of a broken odontoid apophysis, is more reliable immobilisation of vertebral bone fragments. @(6pp Dwg.No.1/7B)@

Title Terms /Index Terms/Additional Words: SPINE; FRACTURE; REPAIR; PLATE; SHAPE; FIT; BONE; MADE; SCREW; HOLE; BUSH; SELF; TAP; FIX; FRAGMENT

Class Codes

International Patent Classification					
IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56; A61B-017/58			Main		"Version 7"

US Classification, Issued: 606065000, 606071000, 606073000

File Segment: EngPI; ;
DWPI Class: P31

?

Set	Items	Description
S1	778	S OSTEOTOM?
S2	9345025	S SHAVE? ? OR SHAVING? OR CUT OR CUTS OR CUTTING OR REAM??? OR MILL OR MILLS OR MILLED OR MILLER? ? OR MILLING OR BORE? ? OR BORING OR DRILL??? OR SCRAPE? ? OR SCRAPING? OR ABRAD? ? OR ABRADING? OR ABRASION? OR FILE? ? OR FILING?
S3	3560322	S REMOV? OR EXTRACT? OR RESECT? OR SHAPE? ? OR SHAPING OR SHORTEN? OR LENGTHEN?
S4	372401	S BONE OR BONES OR BONEY OR BONED OR OSSEOUS? OR OSTEOAL? OR OSTEOID? OR OSTEOLOG? OR PERIOSTE??? OR OSSIF? OR SKELETON?
S5	115319	S RADIUS OR RADII OR VOLAR? ? OR FEMUR OR HUMERUS OR TIBIA? ? OR FIBULA? ? OR METAPHYSEAL? OR METACARPAL? OR META()(PHYSEAL? OR CARPAL?)
S6	4971	S KIRSCHNER? OR (K OR KAY)()(WIRE? ? OR WIRING OR PIN OR PINS OR NAIL OR NAILS OR ROD OR RODS OR PEG OR PEGS OR SCREW???) OR KWIRE? OR KPIN? OR KPEG? OR KSCREW? OR KROD?
S7	14673964	S GUIDE? ? OR GUIDING OR GUIDANC? OR PILOT??? OR INTRODUC??? OR DIRECT? ? OR DIRECTING OR DIRECTOR OR DIRECTORS OR TRACK???
S8	4997	S GUIDEWIRE? OR GUIDETRACK? OR GUIDEMEMBER?
S9	404826	S PLATE OR PLATES OR BONEPLATE? OR ENDPLATE? OR ((BONE? ? OR FRACTUR???) (2N) (REPAIR? OR FIXATION?) (3N) (DEVICE? ? OR APPARAT? OR IMPLANT? OR PROSTHES?))
S10	17493	S S2:S3(3N)S4:S5
S11	3	S (S1 OR S10) (S) S6 (S) S7:S8 (S) S9
S12	1	RD (unique items)
S13	19437	S (FRACTUR??? OR BROKEN) (3N) (S4:S5 OR FEMORAL OR RADIAL OR HUMERAL)
S14	4	S (S1 OR S10) (S) S6 (S) S7:S8 (S) S13
S15	1	S S14 NOT S11
S16	5	S (S1 OR S10) (S) S6 (S) (S9 OR S13)
S17	1	S S16 NOT (S11 OR S15)
S18	58013	S S7(5N) (WIRE? ? OR WIRING OR PIN OR PINS OR NAIL OR NAILS OR ROD OR RODS OR PEG OR PEGS OR SCREW???)
S19	14	S (S1 OR S10) (S) S18 (S) (S9 OR S13)
S20	14	S S19 NOT (S11 OR S15 OR S17)
S21	6	RD (unique items)
S22	5144173	S WIRE? ? OR WIRING OR PIN OR PINS OR NAIL OR NAILS OR ROD OR RODS OR PEG OR PEGS OR SCREW???
S23	44	S (S1 OR S10) (S) S22 (S) S7:S8 (S) (S9 OR S13)
S24	6	S S23/2004:2005
S25	9	S S23/2006:2007
S26	18	S S23 NOT (S11 OR S15 OR S17 OR S20 OR S24:S25)
S27	15	RD (unique items)
S28	181	S (S1 OR S10) (S) S22 (S) (S9 OR S13)
S29	20	S (S1 OR S10) (S) S22 (S) S9 (S) S13
S30	8	S S29 NOT (S11 OR S15 OR S17 OR S20 OR S23)
S31	8	RD (unique items)

; show files

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[File 484] **Periodical Abs Plustext** 1986-2007/Jan W4

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Set	Items	Description
S1	70920	S OSTEOTOM?
S2	2014928	S SHAVE? ? OR SHAVING? OR CUT OR CUTS OR CUTTING OR REAM??? OR MILL OR MILLS OR MILLED OR MILLER? ? OR MILLING OR BORE? ? OR BORING OR DRILL??? OR SCRAPE? ? OR SCRAPING? OR ABRAD? ? OR ABRADING? OR ABRASION? OR FILE? ? OR FILING?
S3	7029803	S REMOV? OR EXTRACT? OR RESECT? OR SHAPE? ? OR SHAPING OR SHORTEN? OR LENGTHEN?
S4	2377970	S BONE OR BONES OR BONEY OR BONED OR OSSEOUS? OR OSTEAL? OR OSTEOID? OR OSTEOLOG? OR PERIOSTE??? OR OSSIF? OR SKELETON?
S5	760755	S RADIUS OR RADII OR VOLAR? ? OR FEMUR OR HUMERUS OR TIBIA? ? OR FIBULA? ? OR METAPHYSEAL? OR METACARPAL? OR META() (PHYSEAL? OR CARPAL?)
S6	9797	S KIRSCHNER? OR (K OR KAY) () (WIRE? ? OR WIRING OR PIN OR PINS OR NAIL OR NAILS OR ROD OR RODS OR PEG OR PEGS OR SCREW???) OR KWIRE? OR KPIN? OR KPEG? OR KSCREW? OR KROD?
S7	6232000	S GUIDE? ? OR GUIDING OR GUIDANC? OR PILOT??? OR INTRODUC??? OR DIRECT? ? OR DIRECTING OR DIRECTOR OR DIRECTORS OR TRACK???
S8	9504	S GUIDEWIRE? OR GUIDETRACK? OR GUIDEMEMBER?
S9	1198465	S PLATE OR PLATES OR BONEPLATE? OR ENDPLATE? OR ((BONE? ? OR FRACTUR???) (2N) (REPAIR? OR FIXATION?) (3N) (DEVICE? ? OR APPARAT? OR IMPLANT? OR PROSTHES?))
S10	59284	S S2:S3 (3N) S4:S5
S11	22	S (S1 OR S10) AND S6 AND S7:S8 AND S9
S12	18	RD (unique items)
S13	137	S (S1 OR S10) AND S6 AND S7:S8
S14	115	S (S1 OR S10) (S) S6 (S) S7:S8
S15	449	S S6(15N)S7:S8
S16	66	S (S1 OR S10) AND S15
S17	20	S S16/2004:2005
S18	2	S S16/2006:2007
S19	42	S S16 NOT (S11 OR S17:S18)
S20	28	RD (unique items)
S21	270	S (S1 OR S10) AND S6 AND S9
S22	193	S (S1 OR S10) (S) S6(S)S9
S23	1190474	S PLATE OR PLATES OR BONEPLATE? OR ENDPLATE?
S24	78935	S FRACTUR??? (3N) (REPAIR? OR FIXATION?)
S25	107	S (S1 OR S10) AND S6 AND S23 AND S24
S26	24	S S25/2004:2005
S27	7	S S25/2006:2007
S28	71	S S25 NOT (S11 OR S19 OR S26:S27)
S29	48	RD (unique items)
S30	38	S (S1 OR S10) AND S6 AND S7:S8 AND S24
S31	13	S S30 NOT (S11 OR S19 OR S28)
S32	10	RD (unique items)
S33	208691	S (FRACTUR??? OR BROKEN) (3N) (S4:S5 OR FEMORAL OR RADIAL OR HUMERAL)
S34	11	S (S1 OR S10) AND S6 AND S7:S8 AND S23 AND S33
S35	0	S S34 NOT (S11 OR S19 OR S28 OR S31)
S36	124	S (S1 OR S10) AND S6 AND S23 AND S33
S37	23	S S36/2004:2005
S38	9	S S36/2006:2007
S39	30	S S36 NOT (S11 OR S19 OR S28 OR S31 OR S37:S38)
S40	26	RD (unique items)
S41	34	S (S1 OR S10) AND S6 AND S7:S8 AND S33
S42	9	S S41 NOT (S11 OR S19 OR S28 OR S31 OR S39)
S43	7	RD (unique items)

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[File 155] MEDLINE(R) 1950-2006/Dec 16

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[File 5] **Biosis Previews(R)** 1969-2007/Jan W4

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[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

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12/7/5 (Item 5 from file: 155) [Links](#)

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MEDLINE(R)

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08619001 **PMID:** 2239046

[Tissue loss injury of the proximal phalanx of the thumb and repair using a rib graft]

Ztratove poraneni zakladniho clanku palce ruky a nahrada stepem zebra.

Pech J; Vavrik P; Schutzner J

I. ortopedicka klinika FVL UK, Praha.

Acta chirurgiae orthopaedicae et traumatologiae Cechoslovaca (CZECHOSLOVAKIA) Jul 1990 , 57 (4)

p339-46 , ISSN: 0001-5415--Print **Journal Code:** 0407123

Publishing Model Print

Document type: Case Reports; Journal Article ; English Abstract

Languages: CZECH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In their case report the authors deal with the loss tissue injury of the proximal phalanx of the thumb caused by a circular saw. The first treatment on the day of the injury was carried out at the local clinic, the edges of the wound were trimmed and the residual small **bone** fragments were **removed**. Then suture was made of the dorsal aponeurosis and a **K-wire** was drilled in percutaneously through the distal phalanx into the base of the proximal phalanx in order to maintain the distance between the fragments. Wide-spectrum antibiotics were applied together with antitetanus-toxic injections and anti-gangrenous serum. After 9 weeks when the wound was healed per primam the patient was sent for further treatment to the central clinic. There they **introduced** extension through the nail of the thumb and left it there for 15 days. 11 weeks after the injury the patients was operated on. A bone graft was made from part of 6th rib and fixed to the residue of the base by a T-shaped **plate**. The distal phalanx was then transfixed to the bone graft by 2 crossed-**K-wires**. The wound healed per primam, **K- wires** were removed after 6 weeks. The grasping function of the hand was preserved, the residual motion was possible in the metacarpophalangeal joint of the thumb, interphalangeal arthrodesis was stable. The patient resumed his original job as a painter.

Record Date Created: 19901207

Record Date Completed: 19901207

12/7/7 (Item 2 from file: 73) [Links](#)

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EMBASE

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13191465 **EMBASE No:** 2005255601

A guide plate for accurate positioning of first metatarsophalangeal joint during fusion

FUHRUNGSPLATTE ZUR EXAKTEN AUSRICHTUNG DER ARTHRODESE IM ERSTEN METATARSOPHALANGEALGELENK

Grondal L.; Stark A.

Dr. L. Grondal, Department of Orthopedic Rehabilitation, Red Cross Hospital, Brinellvagen 2, S-111 28 Stockholm Sweden

Author Email: lollo.grondal@hospital.redcross.se

Operative Orthopädie und Traumatologie (OPER. ORTHOP. TRAUMATOL.) (Germany) 2004 , 16/2 (167-178)

CODEN: OOTPA **ISSN:** 0934-6694

Document Type: Journal ; Article

Language: GERMAN; ENGLISH **Summary Language:** GERMAN; ENGLISH

Number Of References: 16

Objective: Accurate positioning of the first metatarsophalangeal joint during fusion with the help of a special **guide plate**. **Indications:** Painful and deformed first metatarsophalangeal joint, due to rheumatoid arthritis, hallux rigidus or severe hallux valgus. The method may be used either in isolation or as part of a forefoot reconstruction in rheumatoid arthritis. **Contraindications:** Rheumatoid involvement of the interphalangeal joint of the great toe. A valgus position of the hindfoot might need to be addressed first. **Surgical Technique:** Through a straight medial incision, the joint surfaces are freed. The medial exostosis and any remaining cartilage are removed with a small power saw. A 1.4-mm **Kirschner** wire is **introduced** centrally in the first metatarsal head. A Coughlin metatarsal head joint reamer of 18 mm diameter connected to a power drill is passed over the wire. A spherical surface of cancellous **bone** is **shaped**. The procedure is repeated on the base of the proximal phalanx with the reciprocal part of the reamer, resulting in two nicely fitting bony surfaces. They can be positioned in any angle without sacrificing good bone contact. The **guide plate** is applied along the plantar and medial border of the foot and the joint positioned in the desired angles. The joint is temporarily transfixed with two crossed **Kirschner** wires. After a final assessment of the position, including rotation, they are replaced by two 2.7-mm corti-cal screws inserted using the lag screw principle. **Results:** Ten patients, seven women and three men, median age 52 years (31-66 years), all suffering from rheumatoid arthritis were operated with this technique. The mean postoperative hallux valgus angle was 14degrees (2-29degrees) and the dorsiflexion position 12degrees (6-19degrees), measured as angle of inclination from the floor. One pseudarthrosis occurred in a heavy smoker. (c) Urban & Vogel Munchen 2004.

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EMBASE

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12099960 **EMBASE No:** 2003211297

Palmar plate fixation of AO type C2 fracture of distal radius using a locking compression plate - A biomechanical study in a cadaveric model

Leung F.; Zhu L.; Ho H.; Lu W.W.; Chow S.P.

Dr. F. Leung, Department of Orthopaedic Surgery, Queen Mary Hospital, University of Hong Kong, Guangzhou 510515 China

Author Email: kkleunga@hkucc.hku.hk

Journal of Hand Surgery (J. HAND SURG. (GBR)) (United Kingdom) 2003 , 28 B/3 (263-266)

CODEN: JHASE **ISSN:** 0266-7681

Document Type: Journal ; Article

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 16

The stability of palmar **plate** fixation using a locking compression **T-plate** was compared with that of a conventional palmar **T-plate** and a dorsal **T-plate** in a cadaveric model of an AO type C2 fracture of distal radius. The wrist axial

load transmission through the radius was tested for each fixation. The results show that, under 100N axial load, the palmar locking compression T-plate restores stability comparable to that of the intact radius, and is superior to conventional palmar or dorsal T-plates.

12/7/10 (Item 5 from file: 73) [Links](#)

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07863416 EMBASE No: 1999343796

Treatment of Kienbock disease

TRAITEMENT DE LA MALADIE DE KIENBOCK 33E REUNION DU GEM, PARIS

Dautel G.

Main (MAIN) (France) 1999 , 4/3 (143-171)

CODEN: MINMF **ISSN:** 1262-3601

Document Type: Journal ; Review

Language: FRENCH **Summary Language:** ENGLISH; FRENCH

Number Of References: 111

Avascular necrosis of the lunate has been described as early as 1910, but its treatment is still under investigation. This round-table was set up during the 1998 GEM meeting to establish the state of the art in terms of treatment options. The four groups of Lichtmann's classification was used as a common guide-line to all authors to describe their favorite indications. Some treatment options that actually belong to our armementarium, such as conservative treatment, denervation of the wrist, first row resection, **direct** revascularisation of the lunate by implantation of a vascularized pedicle or bone graft were discussed during this session but will not appear in this text. **Osteotomy** of the radius is probably the most commonly-used procedure for any stage of Kienbock disease. A review of the various techniques that belonged to this category was done, including **radius shortening** through a **volar** or dorsal approach, lateral opening, medial closing and lateral closing **osteotomies**. Combined **osteotomies** were also discussed. Results of radius **osteotomies**: A multicentric study was achieved to evaluate the results of **radius shortening** in 180 patients. The majority of patients in this series was quoted as group III in pre-op, according to Lichtmann's classification (80 cases). Ulna variance was calculated on AP preop X ray. The mean value was minus 2,4mm. In this multicentric study, techniques used to achieve radial shortening were numerous, performed at a diaphyseal or metaphyseal level, fixation being achieved, either by a **plate** or **K-wires** (used in metaphyseal **osteotomies** through a dorsal approach). Mean follow-up was 6,4 years. Pain was completely absent at follow-up in 49% of the patients, grasp strength ranged from 70 to 85% of the controlateral side and the majority of patients (69%) went back to the same occupational activity. There was only one documented case in this series with post-operative pronation and supination impairment due to an excessive radial shortening. Ten patients had to be reoperated for a non-union of the **osteotomy** site. Despite the subjective efficacy of this procedure (87% of the patients were satisfied or very satisfied), there were very few documented cases of radiological improvement in terms of lunate shape or density. Ulna lengthening: A retrospective study was conducted on 10 cases with ulna lengthening, using an intramedullary nail. Follow-up ranged from 7 months to 8 years, with one third of pain free patients (3 cases). This technique was used in grade II (2 patients), grade III (6 patients) or grade IV (2 patients). Healing of the **osteotomy** site was achieved in 3 to 7 months but there were two cases with non-union leading to a revision procedure. Despite this high rate of delayed union, subjective results as appreciated by the patients were good with this technique. Capitate shortening: This technique belong to the armementarium that can be used when

faced to a positive ulnar variance. Dorsal approach and staple fixation was used in this short series of 5 cases with good results. Other carpal procedures: A review of the literature was presented, including all the available techniques of intracarpal arthrodesis. Effects of each of these techniques on lunate decompression, residual wrist motion, and influence on natural history of lunate avascular necrosis were discussed.

12/7/11 (Item 6 from file: 73) [Links](#)

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06537483 EMBASE No: 1996201895

The repair of subcondylar fractures of the mandible by using an improved pin-in-groove technique: Results in 8 cases

Ohtake N.; Yamazaki Y.; Shimakura Y.; Matsukura T.; Tsujino I.; Sato A.; Shioya N.

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Japanese Journal of Plastic and Reconstructive Surgery (JPN. J. PLAST. RECONSTR. SURG.) (Japan) 1996 , 39/6 (599-605)

CODEN: KEGEA ISSN: 0021-5228

Document Type: Journal ; Article

Language: JAPANESE Summary Language: ENGLISH; JAPANESE

An open reduction for a subcondylar fracture of the mandible cannot sufficiently expose the site of the fracture because facial nerves run through the surgical field, so that an adequate repositioned fixation is often not possible. However, an alternative method to achieve the repair of such fractures is available, an improved version of the pin-in-groove technique, **introduced** by Wennogle, et al, in 1985, that the authors have developed. Using this technique, described below, they have achieved successful results in 8 patients. Procedurally, to repair a subcondylar fracture of the lower rim of the mandible, a **Kirschner** wire is pierced into the fractured section of the subcondyle from the outer ramus. Next, a groove is made with a **bone-cutting** bar into the compact bone of the outer ramus, after which the **Kirschner** wire is inserted and secured with a mini-**plate**. The 8 patients in which this method was used to repair a subcondylar fracture of the mandible underwent surgery between May and September, 1994. Five were male and 3 were females, with ages that ranged from the teens into the 60s. The parameters to assess the results of this surgery included the surgical time, the need for inter-jaw fixation, postoperative occlusion and jaw movements, the X-ray findings, and any complications. The surgical time to repair a simple fracture ranged from 90 to 150 minutes, and only 2 patients underwent inter-jaw fixation for 3 weeks. Postoperative occlusion and jaw movements in all patients were good, as were the X-ray findings, and the only complication was a temporary facial nerve paralysis in the ramus of 4 patients. As this simple surgical technique can be performed quickly and almost always achieves a successful repositioned fixation, it thus can be recommended for the repair of subcondylar fractures.

12/7/12 (Item 7 from file: 73) [Links](#)

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06182472 EMBASE No: 1995206324

Future materials for foot surgery

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Clinics in Podiatric Medicine and Surgery (CLIN. PODIATR. MED. SURG.) (United States) 1995 , 12/3
(519-544)

CODEN: CPSUE **ISSN:** 0891-8422

Document Type: Journal ; Review

Language: ENGLISH **Summary Language:** ENGLISH

Important advances have been made in the development of biomaterials science and engineering for foot surgery over the past four decades. In this paper, implant materials have been separated into two general categories: temporary **implants** for **bone fixation** and permanent **implants** for joint replacement. As presented, however, currently available temporary **implants** for **bone fixation** are often left in place permanently whereas, in the long run, permanent implants for joint replacement cannot realistically be expected to last the lifetime of the average-aged patient, and thus are actually only temporary. The benefits and problems of each of these two implant classes were first presented to set the stage for a discussion of possible future directions in the development of new biomaterials that offer the promise of providing improvements for patient care. For bone fixation in foot surgery, the most promising future biomaterials are presented as fully bioabsorbable polymer matrix composites. These implant materials have the potential for development to provide the initial strength and stiffness of currently used metal alloys without concern regarding implant removal. With the development of these materials, clinicians and patients will no longer be forced to choose between the risks of implant retrieval and the risks of leaving the implant behind. Current obstacles that must be overcome before these future materials can be **introduced** for general clinical use are related to improvements in mechanical property durability and degradation product biocompatibility. For joint replacement, tissue engineered viable biomaterials for permanent articular cartilage replacement are presented as the most important of the future biomaterials. If truly permanent joint replacement materials are to be developed, the implants must be able to regenerate and sustain themselves to permanently retain their properties. Living and sustainable tissues are therefore essential if implant properties are to be permanently maintained, because all nonviable materials are subject to eventual irreversible structural breakdown, degradation, and fatigue. Again, many problems remain to be solved before these envisioned future materials can be brought to accepted clinical use. However, substantial advances have already been achieved and have demonstrated the feasibility of the development of these materials. Biomaterials science and engineering remains a very challenging and exciting field of research and development. As technology advances, the problems that are faced become more complex and, more than ever, now require interdisciplinary cooperation from molecular and cell biologists, biomaterials scientists and engineers, and clinicians. This is especially true in the relatively new field of tissue engineering. Although the development of new materials advancements is often painstakingly slow and expensive, with sufficient patience and support many new and improved biomaterials developments for application in foot surgery can be expected toward the goal of providing improved and more affordable patient care.

12/7/13 (Item 8 from file: 73) [Links](#)

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05817146 EMBASE No: 1994218341

The reaction of the growth plate on crossing Kirschner wires

DIE REAKTION DER EPIPHYSENFUGE AUF FUGENKREUZENDE BOHRDRAHTOSTEOSYNTHESEN

Boelitz R.; Dallek M.; Meenen N.M.; Jungbluth K.H.

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Unfallchirurgie (UNFALLCHIRURGIE) (Germany) 1994 , 20/3 (131-137)

CODEN: NFLLD ISSN: 0340-2649

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH; GERMAN

In young rabbits of five to six weeks of age we revealed bony bridging as constant reaction of the epiphyseal cartilage on drilling with a 2 mm diameter trephine into the distal femur growth **plate**. Gross growth disturbances will be the consequence of such partial closures. For this present study we inserted one 2 mm **Kirschner**-wire across the epiphyseal **plate** of the distal **femur**. The **drilling** was directed distally. During longitudinal growth the epiphysis moves away from the wire, that remains 8 weeks after the operation completely within the metaphyseal cancellous bone. Four, 8, 12 and 16 weeks postoperatively one group of the rabbits were sacrificed. After radiological examination of the explanted femurs fixation and embedding in methylmetacrylate for morphological examination was performed. Our histological results reveal, that the crossing **Kirschner**-wire does not irritate the growth **plate**, even the physiological structure of the epiphyseal cartilage in the **direct** contact to the metal implant is not altered. The defect within the epiphyseal **plate** left after the relative retraction of the wire caused by growth activity fills with cancellous bone. Its trabecular structure is markedly thinner than the spongy bone within the metaphysis and shows longitudinal orientation. These trabeculae undergo segmental disruption by the growth pressure of the surrounding epiphyseal **plate**. In consequence there is no bone bridging and growth alterations by the **Kirschner**-wire crossing of the epiphyseal **plate**. This proves experimentally the clinical experienced therapeutic value of **Kirschner**-wires for internal fixation of dislocated joint injuries.

12/7/14 (Item 9 from file: 73) [Links](#)

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01688959 EMBASE No: 1980120313

On the osteosynthesis of children's forearm fractures with radius head involvement, olecranon and Monteggia's injury

ZUR OSTEOSYNTHESE KINDLICHER VORDERARMFRAKTUREN UNTER EINSCHLUSS VON RADIUSKOPFCHEN, OLECRANON UND MONTEGGIA-SCHADEN

Gottschalk E.

Abt. Kinderchir., Chir. Klin., Med. Akad., Erfurt Germany

Beitrage zur Orthopadie und Traumatologie (BEITR. ORTHOP. TRAUMATOL.) (Germany) 1980 , 27/2 (78-84)

CODEN: BOTRA

Document Type: Journal

Language: GERMAN Summary Language: ENGLISH

Only few children's forearm fractures account for osteosyntheses in the conservative treatment, which clearly

predominates in injuries of this kind. The indications include soft tissue interpositions, repeated redislocations, open fractures of the 2nd and 3rd degrees, radius head fractures after Judet IV. Apart from **Kirschner's** wires, Rush pins are mainly used. The use of **AO plates**, which are often preferred today, is limited to cases involving medullary canals sealed as a result of previous fractures and for stabilizing bone interponates in connection with elongation **osteotomies**. At the Children's Surgical Department of Erfurt, preference is given to primary osteosynthesis in cases of Monteggia's injuries. In the case of radius heads set in an open state, the fixation material is **introduced** distally in order to prevent intra-articular wire breakage.

12/7/15 (Item 1 from file: 8) [Links](#)

Ei Compendex(R)

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07477845 E.I. No: EIP96083291345

Title: Internal fixation of oblique metacarpal fractures: a biomechanical evaluation by impact loading

Author: Firoozbakhsh, K.K.; Moneim, M.S.

Corporate Source: Sharif Univ of Technology, Tehran, Iran

Conference Title: Proceedings of the 1st 1995 Regional Conference IEEE Engineering in Medicine & Biology Society and 14th Conference of the Biomedical Engineering Society of India

Conference Location: New Delhi, India **Conference Date:** 19950215-19950218

E.I. Conference No.: 45145

Source: Proc 1 1995 Reg Conf IEEE Eng Med Biol Soc 14 Conf Biomed Eng Soc India 1995. IEEE,95TH8089. p 3.27-3.28

Publication Year: 1995

Language: English

Document Type: CA; (Conference Article) **Treatment:** A; (Applications); X; (Experimental)

Journal Announcement: 9610W3

Abstract: Sports related injuries often involve impact as a primary mode of loading. To compare the impact failure strength of five types of internal fixation of metacarpal fracture, one hundred twenty preserved human metacarpals were dynamically tested in compression and bending after oblique **osteotomies** of the metacarpal and internal fixation. The failure occurred within 2 to 6 msec in the compressive impact and was almost immediate in the bending impact. The dorsal **plate** and the intramedullary rods fixations were the strongest. The **K-wire** tension band was significantly weaker than the **plate** fixation. The 2-screws was the weakest fixation in this group. This fixation with high risk of failure against impact loads may be avoided in the patient population who may be subjected to such loadings specially those athletes with **direct** hand involvement. (Author abstract) 6 Refs.

20/7/4 (Item 4 from file: 155) [Links](#)

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MEDLINE(R)

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12247667 **PMID:** 10855334

[A correction technic using an osteotomy-graft in chronic impaction of the radial socket, called "die punch"]

Technique de correction par **osteotomie**-greffe de l'enfoncement invetere de la glene radiale, dit "die punch".

Kapandji A

Clinique de l'Yvette, Longjumeau.

Chirurgie de la main (FRANCE) 1999 , 18 (4) p299-303 , ISSN: 1297-3203--Print **Journal Code:** 100937750

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The central crush of the radial glena, so-called "Die-Punch", may be relatively easy to fix, when it is initially recognized. Unfortunately, it is often ignored, which compromises the future of the radio-carpal joint. When this "die-punch" is at the stage of malunion, the cartilage depression is very difficult to reach to. It is the goal of this described technique: through an antero-lateral way, making a sagittal **osteotomy guided** on a **K-wire**, aiming at the lateral limit of the crush; the lateral fragment comprising the radial styloide process is then turned like a door around a posterior hinge, opening the access to the medial bony cut, at the lower part of it, the depressed fragment is clearly visible. This fragment is lowered with a chisel of appropriate width, until it joins its proper level; then a fragment of cancellous bone taken in the upper part of the cut is crammed in the room above the "die-punch". The "door" is then closed and fixed with a screw, without any problem of consolidation, so as the rehabilitation may be initiated immediately. The practice of this procedure is till now limited to a few cases (two), but the results are very encouraging. This technique is worthy to be tried by other hand surgeons.

Record Date Created: 20000706

Record Date Completed: 20000706

20/7/5 (Item 5 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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12177487 **PMID:** 10591782

[Pioneers in the lengthening of the extremities]

Pioniere der Extremitätenverlängerung.

Bertram C; Nielander K H; König D P

Klinik und Poliklinik für Orthopädie, Universität Köln.

Der Chirurg; Zeitschrift für alle Gebiete der operativen Medizin (GERMANY) Nov 1999 , 70 (11) p1374-8 ,

ISSN: 0009-4722--Print **Journal Code:** 16140410R

Publishing Model Print

Document type: Biography; Historical Article; Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Successful lengthening of the extremities was first published at the beginning of the twentieth century. Those reports in which methods such as the distraction of fragments, callus or epiphysis were mentioned for the first time are reviewed. Lengthening of the extremities by epiphyseal distraction was first mentioned by Bernhard v. Langenbeck in 1869 in an animal experiment. The publications of Codivilla, who **introduced** lengthening by fragment distraction, **Kirschner**, Bier and others are cited and analyzed critically. Thus, the historical development of the lengthening of the extremities is reported from 1869 to the middle of the twentieth century.

Record Date Created: 20000224

Record Date Completed: 20000224

20/7/8 (Item 8 from file: 155) [Links](#)

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MEDLINE(R)

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10349574 **PMID:** 7746925

[Radiologic and MRI evaluation of intra-articular ligamentoplasty using a patellar tendon. Correlations with anatomical results]

Evaluation radiologique et IRM des ligamentoplasties intra-articulaires utilisant le tendon rotulien. Correlations avec les resultats anatomiques.

Djian P; Christel P; Roger B; Witvoet J

Service de chirurgie Orthopedique et Traumatologique, hopital Saint-Louis, Paris.

Revue de chirurgie orthopedique et reparatrice de l'appareil moteur (FRANCE) 1994 , 80 (5) p403-12 , ISSN: 0035-1040--Print **Journal Code:** 1272427

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

INTRODUCTION: the purpose of this study was to evaluate the influence of the graft positioning on the clinical outcome and MRI signal of the graft as well, following ACL reconstruction using the central one-third of the patellar tendon. **MATERIAL AND METHODS:** twenty one patients having a chronic anterior instability sustained a modified Marshall-Mac Intosh procedure, while 15 having a subacute torn ACL had an ACL reconstruction using a free bone-patellar tendon-bone graft. The patients were retrospectively reviewed with a 1.8 year average follow-up (1-3 years). The clinical result was evaluated through the comparative range of motion, the residual laxity as measured with the KT 1000 arthrometer, and the pivot shift test. The roentgenographic analysis was performed from AP and ML views, made first on one-leg standing with the knee at 30 degrees of flexion, and then in "zero" extension with active quadriceps contraction. Lines were drawn to visualise the location of the tibial and femoral tunnels in relation to the tibial plateaus and the roof of the intercondylar notch represented by the Blumensaat line. The analysis of the AP IRM views of the graft allowed to discriminate between homogeneous and heterogeneous graft signals. **RESULTS:** on lateral roentgenograms of normal knees it was found that the Blumensaat line crossed the surface of the medial tibial plateau at its anterior third, at 30 +/- 9 per cent (20-40 per cent range), demonstrating the variability of the intercondylar roof inclination. The range of motion was normal in 22 patients (group I), 8 patients had a flexion deficit (group II), and 6 exhibited an extension deficit (group III). The residual laxity was similar in each group ($p > 0.05$). When comparing group III to group I, patients from group III had a tibial tunnel significantly more anterior with regard to the Blumensaat line ($p < 0.02$). In group III, all patients exhibited an

heterogeneous MRI graft signal ($p < 0.05$), and the angle between the intraarticular part of the graft and the tibial tunnel was higher ($p < 0.001$). These findings were not observed in group II where the location only of the femoral tunnel seemed to influence the flexion deficit ($p > 0.05$). **DISCUSSION AND CONCLUSION:** this study demonstrated that the location of the tibial tunnel with regard to the roof of the intercondylar notch, when the knee is in "zero" extension, was the most relevant parameter controlling the extension deficit resulting from a graft impingement. No relation was found between the tibial tunnel location with regard to the tibial plateaus and the mobility deficit. Graft impingement also was always associated with an heterogeneous graft MRI signal. **CLINICAL RELEVANCE:** when reconstructing the ACL care must be taken when inserting the **K-wire** aimed to **guide the tibial drill**, to obtain a proper position with regard to the roof of the intercondylar notch. The K-wire location must be checked in "zero" extension. Intra-operative X-rays may help.

Record Date Created: 19950615

Record Date Completed: 19950615

20/7/10 (Item 10 from file: 155) [Links](#)

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MEDLINE(R)

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07209696 **PMID:** 3804048

[Percutaneous management of intra-articular fractures of the interphalangeal joints of the fingers]

Perkutane Versorgung von intraartikularen Frakturen der Fingermittelglieder.

Hintringer W; Ender H G

Handchirurgie, Mikrochirurgie, plastische Chirurgie - Organ der Deutschsprachigen Arbeitsgemeinschaft für Handchirurgie - Organ der Deutschsprachigen Arbeitsgemeinschaft für Mikrochirurgie der Peripheren Nerven und Gefässe - Organ der Vereinigung der Deutschen Plastischen Chirurgen (GERMANY, WEST) Nov 1986 , 18 (6) p356-62 , ISSN: 0722-1819--Print **Journal Code:** 8302815

Publishing Model Print

Document type: Case Reports; Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Open reduction of intra-articular fractures of the proximal interphalangeal joints of the fingers requires extensive exposure of the bone. This often leads to disturbance of the delicate mechanics of the joint. The results are, therefore, sometimes not as good as expected. The authors describe a new method of treatment, using the image intensifier with magnification. The fragments are reduced by means of a golf-club shaped instrument, which is inserted into the medullary cavity through a small skin incision and a **drill** hole in the **bone**. After reduction, the position is held by a framework of percutaneously **introduced thin Kirschner** -wires.

Record Date Created: 19870303

Record Date Completed: 19870303

20/7/12 (Item 12 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

MEDLINE(R)

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06125804 **PMID:** 6874369

Mandibular osteotomy in the surgical approach to the oral cavity.

McGregor I A; MacDonald D G

Head & neck surgery (UNITED STATES) May-Jun 1983 , 5 (5) p457-62 , ISSN: 0148-6403--Print **Journal Code: 7909027**

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The improved stability that results from the combination of **K- wire** transfixion of a mandibular **osteotomy** with **direct** wiring has made it possible to use a straight, as opposed to a stepped, **bone cut** and to avoid the invariable need for dental extractions. It has also made possible an alternative **osteotomy** site, immediately anterior to the mental foramen. The use of this site allows mandibular swing to take place after division only of mucous membrane and mylohyoid. It is best combined with a modified lip-splitting incision which has been found to improve ultimate cosmesis.

Record Date Created: 19830923

Record Date Completed: 19830923

20/7/17 (Item 4 from file: 73) [Links](#)

EMBASE

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03497838 **EMBASE No:** 1987014774

Percutaneous treatment of intra-articular fractures of proximal interphalangeal joints of the fingers

PERKUTANE VERSORGUNG VON INTRAARTIKULAREN FRAKTUREN DER FINGERMITTELGLIEDER

Hintringer W.; Ender H.-G.

Unfallkrankenhaus Lorenz Bohler, A-1200 Wien Austria

Handchirurgie Mikrochirurgie Plastische Chirurgie (HANDCHIR. MIKROCHIR. PLAST. CHIR.) (Germany)

1986 , 18/6 (356-362)

CODEN: HMPCD

Document Type: Journal

Language: GERMAN **Summary Language:** ENGLISH

Open reduction of intra-articular fractures of the proximal interphalangeal joints of the fingers requires extensive exposure of the bone. This often leads to disturbance of the delicate mechanics of the joint. The results are, therefore, sometimes not as good as expected. The authors describe a new method of treatment, using the image intensifiers with magnification. The fragments are reduced by means of a golf-club shaped instrument, which is inserted into the medullary cavity through a small skin incision and a **drill** hole in the **bone**. After reduction, the position is held by a framework of percutaneously **introduced** thin **Kirschner** wires.

20/7/19 (Item 6 from file: 73) [Links](#)

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00618376 EMBASE No: 1976174024

A jig for pin insertion in the performance of high tibial osteotomy

Lippert III F.G.; Kirkpatrick G.S.

Dept. Orthop., VA Hosp., Seattle, Wash. 98108 United States

Clinical Orthopaedics and Related Research (CLIN. ORTHOP. RELAT. RES.) 1975 , no.112/- (242-244)

CODEN: CORTB

Document Type: Journal

Language: ENGLISH

The crucial step in high tibial **osteotomy** is to translate the computed angle of correction into a bone wedge outlined by 2 **Kirschner** wires to **guide** the surgery. The wedge can be excised with precision in 2 planes. A jig facilitates accurate placement of the pins to correspond exactly to the predetermined angles.

20/7/20 (Item 1 from file: 5) [Links](#)

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0012042056 Biosis No.: 199900301716

Wire insertion guide and method of use in pinning bones

Author: Graser Robert E (Reprint)

Author Address: 7333 Barlite, Suite 330, San Antonio, TX, 78224, USA**USA

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1221 (1): 15-JUN-99 1999

Medium: print

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: Two semicylindrical bodies, each mounted on a respective end of one member of a pair of pivotally interconnected blades, are closed to form a cylindrical body having a first end in which a frustoconical surface is arranged to guide a wire into a central bore, and a second end communicating with bore and in which a semi-spherical cavity is **shaped** to receive a **bone** end. The wire insertion **guide** is particularly applicable to procedures such as resectional arthroplasties requiring **K-wire** fixation, Hoffman-Clayton type rheumatoid forefoot reconstructive procedures, and procedures relating to finger reconstruction.

20/7/21 (Item 1 from file: 94) [Links](#)

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05529397 JICST Accession Number: 02A0491726 File Segment: JICST-E

My contrivance for limb bone fracture treatment. VIII. Malunion and pseudarthrosis. Treatment of

malunion cure and redressment by drill osteoclasia.

NASU TOMOAKI (1) ; TERAMOTO KENJI (2); NAKAI KAZUNARI (2)

(1) Koritsutakashimasogoboyoin Seikeigeka ; (2) Shiritsushimadashiminbyoin Seikeigeka
Bessatsu Seikei Geka (Orthopedic Surgery) , 2002 , NO.41 , PAGE.254-256 , FIG.7, REF.4

Journal Number: Z0722BAZ **ISSN:** 0287-1645

Universal Decimal Classification: 616.7-089

Language: Japanese **Country of Publication:** Japan

Document Type: Journal

Article Type: Commentary

Media Type: Printed Publication

Abstract: This paper **introduced** a technique of drill osteoclasia by the use of **Kirschner** steel wire for malunion redressment and presents a case to give good result. Though it is not a new method, it seems to be a rational method in a special aspect of **osteotomy**.

20/7/23 (Item 3 from file: 94) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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04615469 **JICST Accession Number:** 00A0434267 **File Segment:** JICST-E

A New Method which Enables Precise Patella Resection in Total Knee Arthroplasty.

NAGAMINE RYUJI (1); URABE KEN (1); MIURA HIROMASA (1); MATSUDA SHUICHI (1); MIYANISHI KEITA (1); HIRATA GO (1); IWAMOTO YUKIHIDE (1)

(1) Kyushu Univ., Grad. Sch.

Seikei Geka to Saigai Geka (Orthopedics & Traumatology) , 2000 , VOL.49,NO.1 , PAGE.59-61 , FIG.3, REF.5

Journal Number: Z0437BAK **ISSN:** 0037-1033

Universal Decimal Classification: 616.7-089

Language: Japanese **Country of Publication:** Japan

Document Type: Journal

Article Type: Short Communication

Media Type: Printed Publication

Abstract: We have developed a new concept which enables precise patella resection. A K-wire is inserted through the patella so that the wire is perpendicular to the anterior surface, after which resection is performed perpendicular to the wire. Nine fresh frozen cadaver patella specimens were used. First, the circumference of the anterior surface was marked because the anterior surface was convex in shape. After the thickness of each patella was measured, a **K-wire** was inserted through the patella perpendicular to the marked plane using a specially designed cutting **guide**. The guide had a concave surface which matched the anterior surface of the patella. The wire was then inserted through the cutting drill, and resection was performed creating a patella 15mm in thickness. The thickness of the resected patella and the angle of the cut surface relative to the marked plane were both measured. The value of the angle was positive when the angle was open superiorly in the sagittal plane and laterally in the coronal plane. The thickness of the patella was 23.8.+-.3.5mm and 15.3.+-.0.4mm before and after the resection, respectively. The angle of the cut surface was -0.7.DEG..+-.2.2.DEG.(-3.5 to 3.5.DEG.) in the sagittal plane and 0.2.DEG..+-.2.9.DEG.(-4 to 5.DEG.) in the coronal plane. The angle was larger in four specimens with poor bone quality. (author abst.)

20/7/25 (Item 5 from file: 94) [Links](#)

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03027133 JICST Accession Number: 96A0919156 File Segment: JICST-E

Intramedullary Pinning in the Treatment of Distal Radial Fractures.

KAMEYAMA MAKOTO (1) ; YOSHIKAWA YASUHIRO (2); IWABE SHOHEI (2) ; ARINO HIROSHI (3) ; SASAKI TAKASHI (4)

(1) Tochigi National Hospital ; (2) Hiratsuka City Hosp. ; (3) Shimizushibyoin ; (4) Saiseikai Kanagawaken Hosp. Nippon Te no Geka Gakkai Zasshi (Journal of Japanese Society for Surgery of the Hand) , 1996 , VOL.13,NO.1 , PAGE.91-97 , FIG.4, REF.6

Journal Number: X0154AAV ISSN: 0910-5700

Universal Decimal Classification: 616.7-089

Language: Japanese **Country of Publication:** Japan

Document Type: Journal

Article Type: Original paper

Media Type: Printed Publication

Abstract: From April 1993 to December 1995, nineteen cases of distal radial fractures without articular involvement were treated by intramedullary pinning. The fractures were regarded as unstable with cast immobilization alone. We classified them into two groups: Group A consisting of 10 cases with the distal radial physis remaining and Group B of 9 cases with this physis having closed. The pinning was performed with a single **K-wire** which was **introduced** from between the dorsal 3rd and 4th compartment under **direct** vision and driven through the medullary cavity. The diameter of **K-wire** used ranged from 1.5mm to 2.4mm. The wire was mildly flexed on entry into the bone enabling it to maintain reduction of the fragments. This is because it continued to try to straighten itself creating a spring effect. This contributed to tensile force to the intact periosteum on the concave side of the fractures enhancing the reduction. Cast immobilization was applied for 3 to 5 weeks postoperatively. Anatomical results were evaluated with Lidstroem's criteria (1959) and functional results according to the demerit point system proposed by Gartland and Werley (1951) and modified by Sarmiento et al (1975). The duration of follow up ranged from 4 months to 25 months with the mean follow-up being 10.8 months. Overall results were excellent results in Group A. Strong periosteum and thick cortex of the radius in this not only prevent overcorrection of the distal fragments but worked as a fulcrum on which the intramedullary wire could produce its spring effect. The force of the spring effects could be divided into two of components, a traction component and a compression component. The former component prevented the **radius** from **shortening**. Although **volar** angulation as a result of overcorrection took place in 3 cases of Group A, it regained almost normal alignment through the remodeling process of healing. (author abst.)

20/7/26 (Item 6 from file: 94) [Links](#)

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01991721 JICST Accession Number: 93A0986593 File Segment: JICST-E

New guide for high tibial osteotomy.

TSUCHIYA YUJI (1); TERASHIMA KAZUHIRO (1); HARA TOSHIKI (1) ; NAKASONE YUTAKA (2); KOGA YOSHIO (2)

(1) Niigata Univ., Faculty of Engineering ; (2) Niigata Univ.

Nippon Rinsho Baiomekanikusu Gakkaishi (Proceedings of Annual Meeting of Japanese Society for Orthopaedic Biomechanics) , 1993 , VOL.14 , PAGE.345-348 , FIG.7, REF.2

Journal Number: X0647ABF

Universal Decimal Classification: 616.7-09

Language: Japanese **Country of Publication:** Japan

Document Type: Conference Proceeding

Article Type: Original paper

Media Type: Printed Publication

Abstract: A three dimensional high tibial osteotomy(HTO) method with spatial guide instrument was developed to obtain correction angle exactly. The intended wedge was calculated by the three dimensional analysis with bi-planar X-rays from lower limb images using computed radiography (CR) system within 10 minutes. The method using **K-wire pin guide** under image control was compared with that presented here and performed by five orthopaedic surgeons to evaluate accuracy. It is shown that for the angle of **resected wedge bone** there was no significant difference between the two methods. But the error of resected angle was within $\pm 10\%$, and the alignment determined by present method was more accurate. (author abst.)

20/7/27 (Item 1 from file: 144) [Links](#)

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Pascal

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12388043 PASCAL No.: 96-0035111

Cannulated screws for odontoid screw fixation and atlantoaxial transarticular screw fixation

DICKMAN C A; FOLEY K T; SONNTAG V K H; SMITH M M

St. Joseph's hosp., barrow neurological inst., div. neurological surgery, Phoenix AZ, USA

Journal: Journal of neurosurgery, 1995

, 83 (6) 1095-1100

ISSN: 0022-3085 CODEN: JONSAC Availability: INIST-6023;
354000058996620250

No. of Refs.: 16 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: USA

Language: English

Cannulated screw systems use thin **Kirschner** wires (**K-wires**) that have been **drilled** into the **bone** to **direct** screw trajectories accurately into small bone fragments. Use of the **K-wires** avoids overdrilling the **pilot** holes and allows fixation of adjacent bone fragments during screw insertion. Hollow tools and hollow screws are inserted into the bone over the K-wires. Cannulated screw fixation is useful in the cervical spine to stabilize odontoid fractures and to treat atlantoaxial instability. This report describes techniques for successful cannulated screw insertion and methods to minimize complications. Cannulated screws have several distinct advantages compared to noncannulated screws : 1) the **K-wires** **guide** the screw position into the bone ; 2) the **K-wire** trajectory can be repositioned easily if the original trajectory was not ideal ; 3) the K-wires allow continuous fixation of adjacent unstable bone fragments ; and 4) the K-wires prevent migration of unstable bone fragments

during screw insertion. Complications associated with the K-wire (breakage, repositioning, and advancement) can be minimized using precise operative techniques, a specialized tool system, and intraoperative fluoroscopic monitoring. A unique cannulated screw tool system was developed specifically for upper cervical fixation to allow percutaneous drilling using long tunneling devices, tissue sheaths, drill **guides**, and long **K-wires**. These tools allow delivery of cannulated fracture-fixation screws at a low angle to the spine through long soft-tissue trajectories. Cannulated screws have significant advantages compared to noncannulated screws for fixation of the unstable cervical spine.

20/7/28 (Item 1 from file: 34) [Links](#)

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03624039 **Genuine Article#:** PR542 **Number of References:** 0

(NO REFS KEYED)

ROENTGENOGRAPHIC AND MRI EVALUATION OF ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION USING A PATELLAR TENDON GRAFT - CORRELATIONS WITH PHYSICAL FINDINGS

Author: DJIAN P; CHRISTEL P; ROGER B; WITVOET J

Corporate Source: HOP ST LOUIS,SERV CHIRURG ORTHOPED & TRAUMATOL,1 AV CLAUDE VELLEFAUX/F-75475 PARIS 10//FRANCE/; HOP ST LOUIS,SERV CHIRURG ORTHOPED & TRAUMATOL/F-75475 PARIS 10//FRANCE/

Journal: REVUE DE CHIRURGIE ORTHOPEDIQUE ET REPARATRICE DE L APPAREIL MOTEUR , 1994 , V 80 , N5 , P 403-412

ISSN: 0035-1040

Language: ENGLISH **Document Type:** ARTICLE

Abstract: Introduction : the purpose of this study was to evaluate the influence of the graft positioning on the clinical outcome and MRI signal of the graft as well, following ACL reconstruction using the central one-third of the patellar tendon.

Material and methods : twenty one patients having a chronic anterior instability sustained a modified Marshall-Mac Intosh procedure, while 15 having a subacute torn ACL had an ACL reconstruction using a free bone-patellar tendon-bone graft. The patients were retrospectively reviewed with a 1.8 year average follow-up (1-3 years). The clinical result was evaluated through the comparative range of motion, the residual laxity as measured with the KT 1000 arthrometer, and the pivot shift test. The roentgenographic analysis was performed from AP and ML views, made first on one-leg standing with the knee at 30 degrees of flexion, and then in <<zero>> extension with active quadriceps contraction. Lines were drawn to visualise the location of the tibial and femoral tunnels in relation to the tibial plateaus and the roof of the intercondylar notch represented by the Blumensaat line. The analysis of the AP IRM views of the graft allowed to discriminate between homogenous and heterogenous graft signals.

Results : on lateral roentgenograms of normal knees it was found that the Blumensaat line crossed the surface of the medial tibial plateau at its anterior third, at 30 +/- 9 per cent (20-40 per cent range), demonstrating the variability of the intercondylar roof inclination. The range of motion was normal in 22 patients (group I), 8 patients had a flexion deficit (group II), and 6 exhibited an extension deficit (group III). The residual laxity was similar in each group ($p > 0.05$). When comparing group III to group I, patients from group III had a tibial tunnel significantly more anterior with regard to the Blumensaat line ($p < 0.02$). In group III, all patients exhibited a heterogeneous MRI graft signal ($p < 0.05$), and the angle between the intraarticular part of the graft and the tibial tunnel was higher ($p < 0.001$). These findings were not observed in group II where the location only of the femoral tunnel seemed to influence the flexion deficit ($p > 0.05$).

Discussion and conclusion : this study demonstrated that the location of the tibial tunnel with regard to the roof of the intercondylar notch, when the knee is in <<zero>> extension, was the most relevant parameter controlling the extension deficit resulting from a graft impingement. No relation was found between the tibial tunnel location with regard to the tibial plateaus and the mobility deficit. Graft impingement also was always associated with a heterogeneous graft MRI signal.

Clinical relevance : when reconstructing the ACL care must be taken when inserting the **K- wire** aimed to **guide the tibial drill**, to obtain a proper position with regard to the roof of the intercondylar notch. The K-wire location must be checked in <<zero>> extension. Intra-operative X-rays may help.

29/7/5 (Item 5 from file: 155) [Links](#)

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MEDLINE(R)

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12862618 **PMID:** 10986370

Extended use of the k wire and the orthopaedic screw: the fixclip project.

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Injury (ENGLAND) Oct 2000 , 31 (8) p575-83 , ISSN: 0020-1383--Print **Journal Code:** 0226040

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The results of the first 280 fixations with the Fixclip systems are reported. The intended advantages of increased fixation accuracy and versatility have been realised. Two hundred and fifty four fixations have been followed-up to union; there have been three deep infections, two persistent non-unions, and 12 fixation failures requiring revision. A range of sizes has allowed use of the system with screws from the small and basic fragment sets with wires from 1.2 to 3 mm diameter. Its use in the management of paediatric conditions, intra-articular fractures, fractures in osteoporotic bone and as a blade **plate** substitute are illustrated. Its potential as a biologically and mechanically effective means of bone fixation is discussed.

Record Date Created: 20001030

Record Date Completed: 20001030

29/7/6 (Item 6 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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12558708 **PMID:** 10506372

[Transpedicular implantation of screws in the thoracolumbar spine. Results of a survey of methods, frequency and complications]

Transpedikuläre Implantation von Schrauben im Bereich der thorakolumbalen Wirbelsäule. Ergebnisse einer Umfrage zur Technik sowie Art und Häufigkeit von Komplikationen.

Bastian L; Knop C; Lange U; Blauth M

Unfallchirurgische Klinik, Medizinische Hochschule Hannover.

Der Orthopäde (GERMANY) Aug 1999 , 28 (8) p693-702 , ISSN: 0085-4530--Print **Journal Code:** 0331266

Publishing Model Print

Document type: Journal Article; Review ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Pedicular fixation has found great acceptance as a modality for spinal fusions. Being a "blind technique" it is associated with a potential high risk of neural and vascular morbidity. In an attempt to evaluate and/or establish a uniformly accepted concept of surgical management we designed a questionnaire composed of seventeen questions

dealing with different pre-, intra- and postoperative procedures in transpedicular fixation. This was sent to 31 experienced surgeons organized in the working group "spine" of the german trauma association. Half of the answers to each question were similar. The other half however, showed a wide variation of thought. It is thus deduced that although some concepts are frequently applied there is no general agreement to an optimal method of surgical handling. Most surgeons use conventional operative cushions for positioning the patients (22/31). Access is usually proceeded by sharp dissection of the lumbodorsal fascia using a scalpel instead of catheterization (21/31), consciously avoiding traumatisation of paravertebral muscle insertion to the transverse processes (22/31), as well as sparing the dorsal branch of segmental arteries (25/31). Intraoperative orientation is attained by inspection coronary and fluoroscopy sagittal (15/31). Most surgeons **remove cortical bone** using a Rongeur (22/31), transpedicular drill hole is prepared by means of a **k-wire** (11/31), for orientation again the fluoroscope is made use of (15/31). On perforating the medial boundary of the pedicle thirteen operators correct the direction on drilling, on perforating the lateral boundary twelve medialise the screws on fixation, and eleven surgeons would leave the screws in place if firm holding is warranted. Half of the questioned surgeons simply lateralise the screws if cerebrospinal fluid leaked from the drill holes. If a malposition of the pedicle screws is not suspected no control computer tomography is performed (21/31). Regarding these facts a comparative evaluation of the different techniques used in transpedicular fixation is lacking. In our opinion further multicenter evaluation is necessary to establish a unified method and thus optimize postoperative results. (31 Refs.)

Record Date Created: 19991013

Record Date Completed: 19991013

29/7/7 (Item 7 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

MEDLINE(R)

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12394848 **PMID:** 10327463

[Temporary external fixation in the correction of non articular mal-unions of the distal radius]

Le fixateur externe temporaire dans la correction extra-articulaire des cals vicieux du radius distal.

Voche P; Dautel G; Dap F; Merle M; Ninou M

Service de Chirurgie Plastique et Reconstructrice de l'Appareil Locomoteur, CHRU Nancy, Hopital Jeanne d'Arc, Toul, France.

Revue de chirurgie orthopedique et reparatrice de l'appareil moteur (FRANCE) Mar 1999 , 85 (1) p18-23 ,

ISSN: 0035-1040--Print **Journal Code:** 1272427

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

PURPOSE OF THE STUDY: The authors reviewed 21 cases of extra articular malunions of the distal radius treated by **osteotomy**, temporary external fixation, then osteosynthesis. Two groups were studied: Group A of 14 patients with dorsal tilt of the distal radius and Group B of 7 patients with palmar tilt of the distal radius. Mean follow-up of this series was 69 months ranged from 12 to 109 months. **MATERIAL AND METHODS:** In Group A, after exposure of the distal radius through a dorsal approach, the site of **osteotomy**, proximal to the distal radio-ulnar joint, was determined by fluoroscopy. The angular correction was done by progressive opening using a small external fixator. After checking on the correction, the bone graft was harvested 7 times on the radius as described by Watson et Castle, 7 times on the iliac crest. Bone fixation was done by two **K- wires** and a cast for 8 to 10 weeks.

Three Sauve-Kapandji procedures was done at the same time. In Group B, the approach was palmar, extended distally to open the carpal tunnel. The distraction was done with a distal T-shaped external fixator. The bone graft was always harvested on the iliac crest. Bone fixation was done with a T-shaped palmar plate. Two Sauve-Kapandji procedures was done at the same time. RESULTS: Group A: Flexion-extension arc was improved of 15.5 p. 100, pronation-supination of 83.7 p. 100 and grip strength of 80 per cent of the pre-operative values. Radiological evaluation showed good correction except one case of undercorrection of the dorsal tilt (-7 degrees) and one case of undercorrection of the radial inclination (+6 degrees). The distal radio-ulnar index was measured at the mean of 0mm postoperatively compared to +5 mm pre-operatively. One patient developed a postoperative radiocarpal arthritis. Group B: Flexion-extension arc was improved of 96.2 p. 100, pronation-supination of 76.9 p. 100 and grip strength of 108.3 p. 100 of the preoperative values. Radiological evaluation showed good correction except one case of overcorrection of the palmar tilt (-10 degrees) and one case of undercorrection of the radial inclination (+7 degrees). The distal radio-ulnar index was measured at the mean of 0mm postoperatively compared to +7 mm pre-operatively. DISCUSSION: The functional consequences of malunions of the distal radius have been stressed by others for more than sixty years. Since, many authors have contributed to refine and improve their surgical correction. Several displacements should be taken into account for the preoperative planning. They are sagittal tilt, frontal horizontalisation, shortening, sagittal and frontal translation, and axial rotation. Many types of osteotomies could be done; closing wedge, opening wedge or reorientation. In some cases, an operative procedure of the distal radio-ulnar joint should be done at the same time. We chose an opening-wedge osteotomy and the use of a temporary external fixator to ensure progressive distraction and good adjustment in the correction of angular deformities. In the dorsal tilt group we were satisfied in using on 7 patients a trapezoidal cortico-cancellous bone graft harvested on the radius. CONCLUSION: The authors would like to stress two points: The technical interest of using a temporary external fixator to adjust the angular correction of the distal radius. The importance of an adequate treatment of distal radius fractures in emergency situation, considering the functional and cosmetic alterations due to malunions and their need for surgical corrections in main instances.

Record Date Created: 19990610

Record Date Completed: 19990610

29/7/8 (Item 8 from file: 155) [Links](#)

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11421129 PMID: 9246998

Reconstruction of tibia by ipsilateral vascularized fibula and allograft. 12 cases with malignant bone tumors.

Ozaki T; Hillmann A; Wuisman P; Winkelmann W

Department of Orthopaedics, Westfälischen Wilhelms University, Munster, Germany.

Acta orthopaedica Scandinavica (NORWAY) Jun 1997 , 68 (3) p298-301 , ISSN: 0001-6470--Print **Journal Code: 0370352**

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

We treated 12 patients with a primary sarcoma of the tibia by resection and centralization of the ipsilateral vascularized fibula with preserved vascularization. The reconstruction was combined with an allograft. The median

bone defect after tumor **resection** was 14 (8-24) cm. The anastomosis between the allograft and the recipient bone was stabilized by a **plate** or screws or **Kirschner-wires**. To reconstruct the soft tissues, 8 patients underwent a gastrocnemius plasty and 2 patients a free vascularized flap of the latissimus dorsi muscle. The mean follow-up period was 2.5 (2-3.5) years. 2 years after implantation, union \geq 75% of the anastomosis area was noted in 10 patients. A deformity or fracture of the distal junction occurred in 7 patients with a screw or **Kirschner-wire** **fixation**. Neither deformity nor **fracture** developed in the 5 patients with **plate**-fixation.

Record Date Created: 19970822

Record Date Completed: 19970822

29/7/9 (Item 9 from file: 155) [Links](#)

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11122950 **PMID:** 8998890

Internal fixation of oblique metacarpal fractures. A biomechanical evaluation by impact loading.

Firoozbakhsh K K; Moneim M S; Doherty W; Naraghi F F

Department of Mechanical Engineering, Sharif University of Technology, Tehran, Iran.

Clinical orthopaedics and related research (UNITED STATES) Apr 1996 , (325) p296-301 , ISSN:

0009-921X--Print **Journal Code:** 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Internal fixation of oblique metacarpal **fractures** was studied in a cadaver model by impact loading. One hundred twenty fresh-frozen human metacarpals underwent compressive and bending impacts after oblique **osteotomy** and internal fixation. Dorsal plating with lag screws, 2 dorsal lag screws (2-screws), crossed **Kirschner** wire tension band (crossed **K-wire**), 5 stacked intramedullary **Kirschner** wire (5-rod), and paired intramedullary **Kirschner** wire (2-rod) were used. The failure occurred within 6 msec in the compressive impact and was almost immediate in the bending impact. The dorsal **plate** and the intramedullary rod fixations were the strongest and were not significantly different from the intact specimens in compressive impact; they were, however, 19% weaker in bending impact. The 2-screws was the weakest fixation in this group. This fixation was 59% weaker in compressive impact and 47% weaker in bending impact compared with the dorsal plating.

Record Date Created: 19970123

Record Date Completed: 19970123

29/7/11 (Item 11 from file: 155) [Links](#)

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10538064 **PMID:** 7632500

[Osteosynthesis using intra-focal pins of anteriorly dislocated fractures of the inferior radial epiphysis]

Osteosynthese par broches intra-focales des fractures a deplacement anterieur de l'epiphyse radiale inferieure.

Hoel G; Kapandji A I

Clinique de l'Yvette, Longjumeau.

Annales de chirurgie de la main et du membre superieur - organe officiel des societes de chirurgie de la main =
Annals of hand and upper limb surgery (FRANCE) 1995 , 14 (3) p142-56; discussion 156-7 , ISSN:

1153-2424--Print **Journal Code:** 9011039

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The authors describe two anterior approaches to intra-focal pinning of distal radius fractures, with anterior tilt, Smith type and anterior margin type. They demonstrate that this fixation mode is as reliable as anterior **plate** osteosynthesis, with less anatomic cost. It allows immediate mobilization and affords good functional results. Performed with regular **K. Wire** or better with "Arum" Pins, this procedure was used in ten Smith's fractures, six anterior margin fractures, one two-margins fractures, and twelve multi-fragment fractures. Anterior pins are also used when excessive anterior reduction is feared in Colle's fractures. Secondary displacements are rare, except **radius shortening** which is possible with all types of fracture and treatment. As cast is prohibited, early rehabilitation provides good and excellent functional results. Complications are exceptional, occurring at the beginning of the authors' experience. Thanks to some precaution, such as the "open approach" and protecting the pin ends, this technique is simple, reliable, economic and effective.

Record Date Created: 19950914

Record Date Completed: 19950914

29/7/12 (Item 12 from file: 155) [Links](#)

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MEDLINE(R)

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10509617 **PMID:** 7604723

Alternative techniques for restoration of bony segments in digital replantation.

Touliatos A S; Soucacos P N; Beris A E; Zoubos A B; Koukoubis T H; Makris H

Department of Orthopaedic Surgery, University of Ioannina, School of Medicine, Greece.

Acta orthopaedica Scandinavica. Supplementum (DENMARK) Jun 1995 , 264 p19-22 , ISSN:

0300-8827--Print **Journal Code:** 0370353

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

We present our experience from 108 partially or totally amputated digits in 87 patients which were replanted or revascularized successfully by the Orthopaedic Microsurgical Team at the University of Ioannina Medical School in Greece, during the period from 1978 to 1994. The majority of the patients were men involved in occupational accidents. **Bone shortening** always preceded the osteosynthesis and the vessel anastomosis, and most of the available methods for osteosynthesis were used, including small **plates**, single lag screws, crossed **Kirschner** wires, a combination of intraosseous cerclage wires and **Kirschner** wires, and intramedullary **Kirschner** wires. Our findings suggest that the most appropriate method for bone fixation in digital replantation is the insertion of one

intramedullary **Kirschner** wire, supplemented by another wire which is inserted at the end of the procedure. This technique was found superior for the following reasons: 1) it's simplicity and the speed of the technique reduced the ischemic time; (2) less bone exposure was required; (3) less skeletal mass was needed for fixation; and (4) prior to the insertion of the second **Kirschner** wire, rotation of the replanted part was possible if it was necessary to re-align the vessels or to correct any rotational deformity.

Record Date Created: 19950810

Record Date Completed: 19950810

29/7/13 (Item 13 from file: 155) [Links](#)

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MEDLINE(R)

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10418240 **PMID:** 7535549

[Treatment of comminuted fractures of the lower end of the radius with internal osteosynthesis, traction and early mobilization]

Traitement des fractures comminutives de l'extremite inferieure du radius par osteosynthese interne, distracteur et mobilisation precoce.

Begue T; Judet T; de Thomasson E; Rouvreau P; de Cheveigne C; Garreau de Loubresse C; Boury G

Service de Chirurgie Generale et Traumatologique, Hopital Tenon, Paris.

Annales de chirurgie de la main et du membre superieur - organe officiel des societes de chirurgie de la main =

Annals of hand and upper limb surgery (FRANCE) 1995 , 14 (1) p5-13 , ISSN: 1153-2424--Print **Journal**

Code: 9011039

Publishing Model Print

Document type: Case Reports; Journal Article; Review ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Goals for treatment of comminutive fractures of the distal radius include restoration of the articular profile of the proximal part of the joint, while axial loading forces must be avoided as much as possible to prevent secondary displacement. The choice of an internal fixation protected by an external wrist distractor-fixator, with early active-passive mobilisation, seems to achieve the goal. Twelve patients with a comminuted fracture of the distal radius, including axial articular impingement displacement were reviewed for this study. All fractures were Frykman's type III, IV, VII or VIII. Distraction was done with a specific external apparatus, allowing an internal fixation, using an anterior **plate** and posterior **Kirschner** wires for the more complex cases. Distraction was released at the end of the surgical procedure, while the distractor was left in place. The wrist was mobilised early in the post-operative period, and the distractor was removed two months later. At a mean follow-up of 8.5 months, two patients were still painful. Mean motion of the wrist joint was 115 degrees for flexion-extension and 35 degrees for radio-ulnar deviation. Radiological results were good (10 cases), in both planes sagittal and frontal, and stable with time. The radio-ulnar index was correct in 11 cases. Only two cases of Sudeck's atrophy were noted. Authors use a specific external wrist distractor to obtain and maintain reduction in comminuted fractures of the distal end of the radius, using internal fixation in combination. Early motion of the wrist, protected by the wrist distractor seems to lower rates of Sudeck's atrophy. (26 Refs.)

Record Date Created: 19950511

Record Date Completed: 19950511

29/7/14 (Item 14 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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10233472 **PMID:** 7975940

[Differential treatment of fractures of the distal radius]

Die differenzierte Behandlung distaler Radiusfrakturen.

Oestern H J; Huls E

Klinik für Unfall- und Wiederherstellungschirurgie, Allgemeines Krankenhaus Celle.

Zentralblatt für Chirurgie (GERMANY) 1994 , 119 (8) p521-32 , ISSN: 0044-409X--Print **Journal Code:**
0413645

Publishing Model Print

Document type: Journal Article; Review ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Treatment of distal fractures of the radius has undergone considerable change during recent years. The cause for this lies primarily in the poor results of conservative treatments. In addition to osseous instability, the fractures of the radius are frequently combined with ligamentary instability as well, thereby exceeding the ability of conservative treatment. Among the many classifications, the AO classification of these fractures has proven to be the best and most widely accepted. This classification allows the recommendation of suitable procedures of treatment. The problem with inadequately healed fractures of the radius lies in the inherent unphysiological loading of the joint in the characteristic dorsal tilted position. This leads to a pathological displacement of the radius of flexion and extension and thereby to an overloading of the dorsal joint cartilage. The **shortening** of the **radius** leads to a mechanical impingement of the triangular fibrocartilagenous complex. The **Kirschner** wire fixation is particularly indicated in type A and type C fractures when combined with an external fixator. Of great importance here is the crossing of the **K-wires**, best accomplished by inserting an additional wire in a proximal to distal direction to achieve maximal mechanical stability. Biodegradable fixation devices are not yet in widespread use, as high costs and possible foreign body reactions have prevented their acceptance. The **plate** osteosynthesis has its domain in the treatment of volar luxation fractures (B3) and the partially articular fractures of the radius (B2). The domain of the external fixator, on the other hand, lies in the C2 and C3 fractures in combination with the **K-wire** osteosynthesis. Changing the mode of treatment to a **plate** osteosynthesis after two to three weeks allows a functional postoperative treatment. By use of a differentiated treatment regimen, the complication rate can be significantly reduced whose cause frequently lies in repeatedly attempted repositions. Nevertheless, a rupture of the tendon of the M. extensor pollicis longus takes place in a certain percentage of cases (less than 0.2%) due to the unusual vascularization of this tendon. The dystrophy of Sudeck has become a relatively rare occurrence. A connection between a compression syndrome of the median nerve and the dystrophy of Sudeck has been discussed. The differentiated management has led to a change from a purely conservative treatment to a more varied treatment of the fractures of the distal radius. In our own patients conservative treatment was carried out in 27.5%. (76 Refs.)

Record Date Created: 19941208

Record Date Completed: 19941208

29/7/15 (Item 15 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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09897920 **PMID:** 8294742

Comparative fatigue strengths and stabilities of metacarpal internal fixation techniques.

Firoozbakhsh K K; Moneim M S; Howey T; Castaneda E; Pirela-Cruz M A

Department of Orthopaedics and Rehabilitation, School of Medicine, University of New Mexico, Albuquerque
87131-5296.

Journal of hand surgery (UNITED STATES) Nov 1993 , 18 (6) p1059-68 , ISSN: 0363-5023--Print **Journal**
Code: 7609631

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

To study quantitative differences in the fatigue strength and stability obtained with 5 types of internal **fixation** of metacarpal **fractures**, 105 preserved human metacarpals were cyclically tested in bending, torsion, and axial loading after oblique **osteotomies** of the metacarpal and internal fixation. The dorsal **plate** with lag screw was superior in all modes, followed by the two dorsal lag screws, crossed **Kirschner** wire tension banding, and intramedullary **Kirschner** wire fixation. The five intramedullary and the paired intramedullary **Kirschner** wire fixations were not statistically different. The fatigue life of the **plate** fixation was significantly larger in bending (1.5 times), torsion (1.6 times), and axial loading (2.5 times) than the second strongest fixation, two dorsal lag screws. Its initial rigidity was significantly higher in axial loading (1.5 times) but was not statistically different in bending and torsion.

Record Date Created: 19940301

Record Date Completed: 19940301

29/7/16 (Item 16 from file: 155) [Links](#)

Fulltext available through: [SCIENCEDIRECT](#)
MEDLINE(R)

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08762713 **PMID:** 1983628

[Treatment of distal radius fracture. Surgical technique: bore wire osteosynthesis]

Behandlung der distalen Radiusfraktur. Operative Technik: Bohrdraht-Osteosynthese.

Sturmer K M; Letsch R; Koeser K; Schmit-Neuerburg K P

Abteilung fur Unfallchirurgie, Universitätsklinikum Essen.

Langenbecks Archiv fur Chirurgie. Supplement II, Verhandlungen der Deutschen Gesellschaft fur Chirurgie.

Deutsche Gesellschaft fur Chirurgie. Kongress (GERMANY) 1990 , p647-56 , ISSN: 0173-0541--Print

Journal Code: 9200455

Publishing Model Print

Document type: Journal Article; Review ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The **Kirschner** wire fixation is mainly indicated in unstable types of Colles' and children's fractures of the distal

radius. Out of 2760 distal radius fractures (1975-1989) 626 (20.7%) were treated operatively including 326 (11.8%) with **K-wires**. Primary operation was performed in 53.5% immediately after trauma. Exposing the sensitive radial nerval paths, 3-4 **K-wires** were inserted from the radial and the dorsoulnar aspect. The **K-wire** ends were covered subcutaneously. The clinical evaluation of a series of 226 patients according to the score of Lidstrom presented 79% excellent and good, 16% fair and 5% poor results. The clinical results correlate to the radiocarpal angle and radial shortening. Because of additional injuries to the ulnar complex give worse results in reposition, the ulnar styloid should be fixed. (11 Refs.)

Record Date Created: 19920331

Record Date Completed: 19920331

29/7/17 (Item 17 from file: 155) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
[MEDLINE\(R\)](#)

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08092635 **PMID:** 2734399

Internal fixation of malar fractures: an experimental biophysical study.

Rinehart G C; Marsh J L; Hemmer K M; Bresina S

Division of Plastic and Reconstructive Surgery, Washington University School of Medicine, St. Louis, Mo.

Plastic and reconstructive surgery (UNITED STATES) Jul 1989 , 84 (1) p21-5; discussion 26-8 , ISSN:

0032-1052--Print **Journal Code:** 1306050

Publishing Model Print; Comment in Plast Reconstr Surg. 1990 Apr;85(4) 641; Comment in PMID 2315409;

Comment in Plast Reconstr Surg. 1990 Mar;85(3):481-2; Comment in PMID 2305001; Comment in Plast Reconstr Surg. 1990 Oct;86(4):802-3; Comment in PMID 2217602

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Open reduction and internal **fixation** of displaced zygoma **fractures** are necessary to avoid immediate and delayed facial disfigurement. Interosseous wires, **Kirschner** wires, and more recently, rigid metallic miniplates have been recommended for fixation of these and other midfacial fractures. However, the precise physical stability of the zygoma with respect to wire versus miniplate fixation methods and with respect to the number and location of miniplates applied is not known. Noncomminuted zygoma fractures were simulated by saw **osteotomy** in eight fresh human cadaver heads (16 zygoma "fractures"). Each zygoma was sequentially fixated with three miniplates, two miniplates, one miniplate, and three interosseous wires across the orbital rim and arch "fractures". Static and oscillating loads simulating maximal physiologic masticatory stresses were applied to the fixated zygoma along the lines of action of the masseter muscle by means of a tensometer. The stability and adequacy of each pattern of fixation were recorded. Double-miniplate fixation across the orbital rim of simulated noncomminuted zygoma "fractures" is sufficient to withstand static and oscillating loading similar to physiologic masticatory forces. Neither single-miniplate fixation nor triple-wire fixation are sufficient to stabilize the zygoma against similar forces.

Record Date Created: 19890725

Record Date Completed: 19890725

29/7/18 (Item 18 from file: 155) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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08015553 PMID: 2924472

Intraarticular fractures of the distal humerus. Surgical treatment and results.

Letsch R; Schmit-Neuerburg K P; Sturmer K M; Walz M

Department of Traumatology, University of Essen, West Germany.

Clinical orthopaedics and related research (UNITED STATES) Apr 1989 , (241) p238-44 , ISSN:

0009-921X--Print Journal Code: 0075674

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In a 12-year period, 104 patients with intraarticular fractures of the distal humerus received surgical treatment. Based on the Arbeitsgemeinschaft fur Osteosynthesefragen/Association for the Study of Internal Fixation (AO/ASIF) classification, there were 40 monocondylar fractures, 46 bicondylar fractures, and 18 fractures of the ulnar epicondyle with the fragment dislocated in the elbow joint. In children almost all fixations were done with **Kirschner wires**. The adult fractures were stabilized according to the recommendations of the AO/ASIF, i.e., monocondylar fractures by screws and/or **single-plate fixation** and bicondylar fractures by screws and dual- **plate fixation**, preferably with reconstruction **plates**. Comminuted fractures required an additional **osteotomy** of the olecranon. Except for children, the essential feature of postoperative management was early functional treatment by continuous passive motion. Eighty-eight patients (84.6%) were followed with an average follow-up time of 4.4 years. The results were evaluated for range of motion, pain, working capacity, neural and vascular impairment, valgus/varus deformity, and subjective judgment. The long-term outcome of almost 81% good and very good results suggests that operative treatment can be valuable when indications, anatomic surgical reconstruction, and postoperative care are performed correctly.

Record Date Created: 19890510

Record Date Completed: 19890510

29/7/19 (Item 19 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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07920376 PMID: 3232327

A combined tension band and lag screw technique for fixation of olecranon osteotomies.

Palmer R H; Aron D N; Chambers J N

Department of Small Animal Medicine, College of Veterinary Medicine, University of Georgia, Athens 30602.

Veterinary surgery - VS - the official journal of the American College of Veterinary Surgeons (UNITED STATES)

Nov-Dec 1988 , 17 (6) p328-32 , ISSN: 0161-3499--Print Journal Code: 8113214

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A combined tension band and lag screw technique for fixation of olecranon **osteotomies** was used in six canine clinical patients weighing 4.5 to 19 kg. After the proximal part of the ulnar shaft was exposed, a screw hole was drilled and tapped just cranial to the caudal cortex of the olecranon. An **osteotomy** was performed and the hole in the olecranon fragment was overdrilled to form a gliding hole. For reconstruction, the olecranon was reduced anatomically and compressed with a screw placed in lag fashion. With the trochlear notch exposed, a **Kirschner** wire was inserted cranial to the screw, using care not to enter the elbow joint. A double-twist figure-eight tension band wire was placed around the **Kirschner** wire in five dogs and around the screw in one dog. In this dog, a spiked washer was used with the screw because a small olecranon fragment had been produced by incorrect **osteotomy** position. A painful soft tissue swelling over the prominent washer, which resolved after implant removal, was the only complication attributed to the technique. The combined tension band wire and lag screw technique was a rapid and reliable method for fixation of olecranon **osteotomies**.

Record Date Created: 19890418

Record Date Completed: 19890418

29/7/20 (Item 20 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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07442310 **PMID:** 2888274

[Choice of surgical procedure of the distal radius. Bore wire versus plate]

Zur Wahl des Operationsverfahrens am distalen Radius. Bohrdraht versus Platte.

Letsch R; Schmit-Neuerburg K P; Schax M

Aktuelle Traumatologie (GERMANY, WEST) Jun 1987 , 17 (3) p113-9 , ISSN: 0044-6173--Print **Journal**
Code: 0421405

Publishing Model Print

Document type: Case Reports; Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

At the distal radius surgical treatment is indicated in fractures with defect, compression zone or re-dislocation, fractures with joint depression, open fractures and fractures with neurological and circulatory impairment. **K-wire** transfixation is mainly indicated in unstable fractures of elderly patients, in juvenile fractures with involvement of the epiphyseal line, and in simple intraarticular fractures, if the articular surface can be restored easily. **T-plate** osteosynthesis is the method of choice in fractures with volar displacement (Smith-Goyrand), in dislocated unstable intraarticular fractures with at least two main fragments to support screws securely, in unstable extraarticular fractures, especially with large zones of compression or defects, in combined fractures of the scaphoid and the styloid processus of the radius, and in corrective **osteotomies** after posttraumatic misalignment. Basing on an evaluation of our own experience with 226 **K-wire** transfixations and 159 **T-plate** osteosyntheses, indication, surgical technique, postoperative treatment and results of the two methods are compared.

Record Date Created: 19871013

Record Date Completed: 19871013

29/7/21 (Item 21 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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07123535 PMID: 3760493

The stability of internal fixation in the proximal phalanx.

Black D M; Mann R J; Constine R M; Daniels A U

Journal of hand surgery (UNITED STATES) Sep 1986 , 11 (5) p672-7 , ISSN: 0363-5023--Print **Journal Code: 7609631**

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A biomechanical study was performed to assess quantitative differences in the stability obtained with five commonly used types of internal fixation used in proximal phalangeal fractures. The techniques included dorsal plating, dorsal plating combined with an interfragmentary lag screw, two interfragmentary lag screws, tension-band technique, and crossed **Kirschner** wires. Rigidity and strength in apex palmar bending were determined after oblique **osteotomy** and fixation of the proximal phalanx. The failure modes for each fixation technique were also observed and described. The results showed that both of the techniques that used interfragmentary lag screws across the oblique **osteotomies** provided significantly more rigidity than did dorsal plating alone or the wired configurations but that measurements of strength were similar between all techniques tested. Dorsal **plates** were at a mechanical disadvantage on the compression surface in our apex palmar bend test and consequently provided no more rigidity and strength than did the wired techniques. The tension band technique represented a combination of stiff and flexible intraosseous wires without strict application of tension band principles and provided intermediate rigidity and strength. Rigidity and strength in intact proximal phalanges in the controls were significantly greater than in all techniques tested.

Record Date Created: 19861119

Record Date Completed: 19861119

29/7/22 (Item 22 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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06434578 PMID: 6378734

[What is the value of stable osteosynthesis of the distal radius?]

Was leistet die stabile Osteosynthese am distalen Radius?

Pfeiffer K M; Lauber P

Handchirurgie, Mikrochirurgie, plastische Chirurgie - Organ der Deutschsprachigen Arbeitsgemeinschaft für Handchirurgie - Organ der Deutschsprachigen Arbeitsgemeinschaft für Mikrochirurgie der Peripheren Nerven und Gefässe - Organ der Vereinigung der Deutschen Plastischen Chirurgen (GERMANY, WEST) Jun 1984 , 16 (2) p80-2 , ISSN: 0722-1819--Print **Journal Code: 8302815**

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

127 or 4% of the fractures of the distal radius seen in our department between 1968 and 1979 have been treated by internal fixation. 85 of these wrists could be reviewed after an average of 4.8 years. 70% of the fractures were multifragmentary and 87% involved the joint surface. In this difficult group correct length of the radius was restored in two thirds, and physiological angles of the joint in one third of the cases. In spite of frequent limitation of motion of the wrist joint, 80% of the patients were satisfied with the result. Careful selection of cases for internal fixation is necessary. It is indicated mainly in the Smith type fractures but may be replaced by percutaneous **K-wire** pinning, the external fixator or a delayed **osteotomy**.

Record Date Created: 19840912

Record Date Completed: 19840912

29/7/23 (Item 23 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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05796134 **PMID:** 7086094

A phalangeal fracture model--quantitative analysis of rigidity and failure.

Massengill J B; Alexander H; Langrana N; Mylod A

Journal of hand surgery (UNITED STATES) May 1982 , 7 (3) p264-70 , ISSN: 0363-5023--Print **Journal Code:** 7609631

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Nine types of internal fixation techniques were tested in 4-point bending using a pig metacarpal model for phalangeal fractures. Levels of bending rigidity and bending moments at failure were determined, and the modes of failure are described. **Plate** and screw fixation afforded the greatest rigidity, and epiphyseal fractures occurred, leaving intact the test section. Flexible wire loop fixation failed by wire **cutting into bone** when a square knot was used. Twisted wire unraveled when placed in tension. Depending on the fracture type and the wire placement. **Kirschner** wires failed either by slipping in the bone, twisting in the bone cortex, or bending at the bone cortex interface. Rigidity varied widely depending on the way in which the wires were employed.

Record Date Created: 19820814

Record Date Completed: 19820814

29/7/24 (Item 24 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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04496057 **PMID:** 889524

[Fractures of the neck of femur in young children (author's transl)]

Schenkelhalsfrakturen im Kindesalter. Eine Langzeitnachsuntersuchung von 12 Fallen fruhkindlicher Schenkelhalsfrakturen und eine Literaturstudie.

Pfarringer W; Rosemeyer B

Archiv für orthopädische und Unfall-Chirurgie (GERMANY, WEST) Jun 30 1977 , 88 (3) p281-308 , ISSN: 0003-9330--Print **Journal Code:** 0002266

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The problems of femoral neck fractures in young children are discussed. Results of 12 own cases are reviewed with an average age of the patients of 7.5 years at the time of accident. The average time between accident and last examination was 12 years. The operative technique, pre- and postoperative care, indications for conservative treatment and late complications are discussed. All types of fractures should be treated operatively. **K-wire** fixation is sufficient in most cases and does not damage the epiphyseal **plate**. Immobilization in POP spika is advisable for 6 weeks. With delayed operative treatment of intracapsulare fractures the intraarticular haematoma should be aspirated. Traumatic epiphyseolysis should be reduced by manipulation or operatively and stabilized by **K-wires**. The treatment of pseudarthrosis is by internal fixation and bone grafting. Late valgus and especially varus deformations should be corrected by intertrochanteric **osteotomy**.

Record Date Created: 19770922

Record Date Completed: 19770922

29/7/25 (Item 25 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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04317734 **PMID:** 1002599

Radiologic and gross anatomic evaluation of bone healing in the dog.

Braden T D; Brinker W O

Journal of the American Veterinary Medical Association (UNITED STATES) Dec 15 1976 , 169 (12) p1318-23 , ISSN: 0003-1488--Print **Journal Code:** 7503067

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Bone healing associated with 3 techniques of midshaft femoral **fracture fixation** in 36 young adult Beagle-type dogs was evaluated in radiographic and gross pathoanatomic studies. A serrated transverse fracture was surgically and aseptically created on the midshaft of either the left or the right femur of each dog. The fixation devices used were intramedullary (IM) pin, IM pin and 1/2 **Kirschner** device, and tension bone **plates**. The radiographic evaluation was done in series. The first radiographs were taken during surgery. Radiographs were then taken immediately after surgery, to record the status of reduction, alignment, and fixation. Radiographs were taken at the 4th and 10th postoperative weeks, to monitor healing. All dogs were euthanatized at the 10th week. Both the normal femur and the healing **femur** were **removed** from all dogs, all soft tissue was **removed** from the **bone**, and each femur was examined grossly. Each type of fixation was associated with a distinct mode of osteogenesis. Bony union and clinical union (that stage in the healing process when fixation can be removed) were defined as a successful conclusion to each case. Malunion and nonunion were defined as unsuccessful conclusions. Delayed union was

defined as neither successful nor unsuccessful. The IM pin cases had a 64.2% success rate and a 14.2% failure rate. The IM pin and 1/2 **Kirschner** cases had a 100% success rate. The bone **plate** cases were 91% successful, with 0% failure. A problem identified with IM pinning was axial rotation (6 of 14 or 42% of the cases). It was concluded that IM pins should not be used alone for the **fixation** of femoral **fractures** in adult dogs.

Record Date Created: 19770224

Record Date Completed: 19770224

29/7/26 (Item 1 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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12080702 **EMBASE No:** 2003191213

Principles of internal fixation as applied to the hand and wrist

Jabaley M.E.; Wegener E.E.

Dr. M.E. Jabaley, 971 Lakeland Drive, Jackson, MS 39216 United States

Author Email: jabaley@psa-ms.com

Journal of Hand Therapy (J. HAND THER.) (United States) 2003 , 16/2 (95-104)

CODEN: JHTHF **ISSN:** 0894-1130

Document Type: Journal ; Article

Language: ENGLISH

Number Of References: 15

29/7/27 (Item 2 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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12046623 **EMBASE No:** 2003158102

Plating of rat femoral shaft osteotomies: Report of a technique and preliminary results

Conflitti J.; Graves M.; Russell G.; Tucci M.; Benghuzzi H.

J. Conflitti, Univ. of Mississippi Medical Center, Jackson, MS United States

Biomedical Sciences Instrumentation (BIOMED. SCI. INSTRUM.) (United States) 2003 , 39/- (278-283)

CODEN: BMSIA **ISSN:** 0067-8856

Document Type: Journal ; Conference Paper

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 6

Development of a small animal model to study fracture healing has been challenging in the past. Stabilization of **osteotomy** in small animals has mainly been accomplished using Krishner wires. Krisheners offer stabilization, but can result in a significant increase in fracture callus. An alternative approach using a modified twenty-five hole 1.5 mm stainless steel **plate** was used to stabilize a 5 mm femoral **osteotomy**, and fracture stabilization was followed for a period of 15 weeks in adult male rats. Fifty four of fifty-six animals (96%) were followed 15 weeks post operatively. Within the first few days post operatively, two animals showed evidence of fixation failure due to technical error, and the animals were humanely sacrificed. Otherwise, after two days post-operatively the remaining

54 animals were weight bearing. At 15 weeks post-operatively, the fracture was stable with little bone formation evident. Therefore, this technique can effectively be used to evaluate compounds which will enhance bone formation. The technique allows for stable fixation of the control with little callus formation and bone ingrowth. This model will allow for x-ray analysis to follow bone growth in relation to bone enhancing compounds.

29/7/28 (Item 3 from file: 73) [Links](#)

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EMBASE

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11912116 EMBASE No: 2003022490

Results of treating slipped capital femoral epiphysis by pinning in situ

THERAPIEERGEBNISSE DER IN-SITU-SPICKUNG BEI DER EPIPHYSEOLYSIS CAPITIS FEMORIS JUVENILIS LENTA

Arnold P.; Jani L.; Scheller G.; Herrwerth V.

Author Email: peter.arnold@ortho.ma.uni-heidelberg.de

Orthopäde (ORTHOPADE) (Germany) 2002 , 31/9 (880-887)

CODEN: ORHPB **ISSN:** 0085-4530

Document Type: Journal ; Article

Language: GERMAN **Summary Language:** ENGLISH; GERMAN

Number Of References: 55

The primary aim in treatment of chronic SCFE consists of immediate stabilization of the epiphysis to prevent further slipping. For mild degrees of slipping (<30degrees), pinning in situ is the treatment of choice. With slips between 30 and 50degrees, the decision should be based on individual factors (age, functional limitation of the hip joint) whether pinning in situ is sufficient or whether an additional intertrochanteric **osteotomy** according to Imhauser should be performed. The choice of implant should ensure a safe and stable connection between the epiphysis and the femoral neck without resulting in a substantial impairment of growth of the femoral neck due to premature closure of the growth **plate**. Since 1982 we have used **K wires** for in situ pinning of the affected hip as well as for prophylactic pinning of the nonaffected hip with a low complication rate. In a clinical and radiological study, 65 patients with a chronic slip of less than 50degrees could be assessed after in situ pinning. Almost 75% were pain-free after a follow-up interval of 9.8 years, and 92% achieved a good or very good result according to the criteria of the Iowa hip score, the mean score being 95.1 points. According to the radiological score of Schultz, five patients (7.7%) demonstrated a grade I osteoarthritis. One patient showed a partial necrosis of the femoral head; chondrolysis was not observed.

29/7/31 (Item 6 from file: 73) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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10827020 EMBASE No: 2000306194

Extended use of the k wire and the orthopaedic screw: The Fixclip(TM) Project

Baker A.S.

A.S. Baker, 123 Tavistock Street, Bedford MK40 2SB United Kingdom

Author Email: allenbaker@uk-consultants.co.uk

Injury (INJURY) (United Kingdom) 2000 , 31/8 (575-583)

CODEN: INJUB **ISSN:** 0020-1383

Publisher Item Identifier: S0020138300000553

Document Type: Journal ; Article

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 6

The results of the first 280 fixations with the Fixclip(TM) systems are reported. The intended advantages of increased fixation accuracy and versatility have been realised. Two hundred and fifty four fixations have been followed-up to union; there have been three deep infections, two persistent non-unions, and 12 fixation failures requiring revision. A range of sizes has allowed use of the system with screws from the small and basic fragment sets with wires from 1.2 to 3 mm diameter. Its use in the management of paediatric conditions, intra-articular fractures, fractures in osteoporotic bone and as a blade **plate** substitute are illustrated. Its potential as a biologically and mechanically effective means of bone fixation is discussed. Copyright (C) 2000 Elsevier Science Ltd.

29/7/32 (Item 7 from file: 73) [Links](#)

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EMBASE

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07841466 **EMBASE No:** 1999085807

Salvage of contaminated fractures of the distal humerus with thin wire external fixation

Ring D.; Jupiter J.B.; Toh S.

Dr. J.B. Jupiter, Massachusetts General Hospital, ACC 527, 15 Parkins St., Boston, MA 02114 United States
Clinical Orthopaedics and Related Research (CLIN. ORTHOP. RELAT. RES.) (United States) 1999 , -/359
(203-208)

CODEN: CORTB **ISSN:** 0009-921X

Document Type: Journal ; Article

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 16

Fractures and **osteotomies** of the distal humerus that are contaminated or infected represent a difficult management problem. Stable anatomic fixation with **plates** and screws, the acknowledged key to a good result in the treatment of bicondylar fractures, may be unwise. A thin wire circular (Ilizarov) external fixator was used as salvage treatment in such complex situations in five patients. The fixator allowed functional mobilization of the elbow while allowing achievement of the primary goal of eradicating the infection or colonization. Two patients required a second operation for fixation of a fibrous union of the lateral condyle. One patient with a vascularized fibular graft later required triple **plate** fixation for malalignment at the distal host and graft junction. Four of five patients ultimately achieved complete union. The fracture remained ununited in one patient who has declined additional intervention. All five patients achieved at least 85degreeulnohumeral motion, two after a secondary elbow capsulectomy performed after healing was achieved. This experience suggested that the Ilizarov construct, although not a panacea, represents a reliable method of skeletal stabilization that allows functional mobilization while elimination of

infection or colonization is ensured. If necessary, stiffness and incomplete healing can be addressed with an increased margin of safety at subsequent operations.

29/7/33 (Item 8 from file: 73) [Links](#)

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06756679 EMBASE No: 1997038165

A comparative mechanical analysis of plate fixation in a proximal phalangeal fracture model

Lins R.E.; Myers B.S.; Spinner R.J.; Levin L.S.

Dr. R.E. Lins, Hand Treatment Center, 980 Johnson Ferry Road, Atlanta, GA 30342 United States

Journal of Hand Surgery (J. HAND SURG. (USA)) (United States) 1996 , 21/6 (1059-1064)

CODEN: JHSUD ISSN: 0363-5023

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

Number Of References: 21

A biomechanical study compared the mechanical properties of hand and craniofacial plating systems commonly used in proximal phalangeal fractures. Two **plates** of each of the various systems were mounted dorsally on a yellow- birch-dowel model of a proximal phalanx after a transverse cut was made in the middle of the section of the dowel, modeling a midshaft transverse **osteotomy** or fracture. Torsional rigidity, as well as four-point bending rigidity in apex dorsal, lateral, and volar directions, was achieved. Failure testing in apex palmar four-point bending was then examined. Between plating systems, torsion varied 1,600% and results of apex palmar testing varied 1,500%. Apex palmar moment-to-failure testing varied 1,000% and represented a 3.5%-38% range of intact proximal phalangeal strength. This also represented 12%-128% of the maximum calculated in vivo bending moments of the proximal phalanx. The wide variation in **plate** strengths and stiffness raises questions as to the suitability of certain plating systems with regard to early mobilization. Moreover, some plating systems tested were mechanically weaker than the reported strengths of certain **Kirschner** wire fixation techniques.

29/7/34 (Item 9 from file: 73) [Links](#)

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EMBASE

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05365996 EMBASE No: 1993134081

Reconstructive procedures for malunion and traumatic arthritis

Fernandez D.L.

Department of Orthopaedic Surgery, Lindenhofspital, Bremgartenstrasse 117, CH-3012 Berne Switzerland

Orthopedic Clinics of North America (ORTHOP. CLIN. NORTH AM.) (United States) 1993 , 24/2 (341-363)

CODEN: OCLNA ISSN: 0030-5898

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

Despite the fact that surgical management of fractures of the distal radius has become more aggressive, leading to substantial improvement of anatomic results, malunion and post-traumatic arthritis remain the two most common complications following conservative treatment. Techniques, operations, and salvage procedures are discussed in this article.

29/7/36 (Item 11 from file: 73) [Links](#)

EMBASE

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00042606 EMBASE No: 1974032645

Comparative biomechanical evaluation of bone healing in the dog

Braden T.D.; Brinker W.O.; Little R.W.; et al.

Dept. Small Anim. Surg. Med., Coll. Veter. Med., Michigan State Univ., East Lansing, Mich. 48823 United States

Journal of the American Veterinary Medical Association (J. AM. VET. MED. ASSOC:) 1973 , 163/1 (65-69)

CODEN: JAVMA

Document Type: Journal

Language: ENGLISH

A project was devised to compare the ultimate strength and stiffness of normal bone to healing bone 10 wks after **fixation** of midshaft (femur) **fractures** with intramedullary (i.m.) pin, i.m. pin and half **Kirschner** (1/2 K.) splints, or a tension bone **plate**. The 1/2 K. devices were removed at the 4th postoperative wk, the i.m. pins (from both groups) were removed at the 6th postoperative week, and the **bone plates** were **removed** after euthanasia, which was 10 wk for all cases. Percentage recovery (healing) was derived by determination of ultimate strength and stiffness in normal and healing femurs of the same dog. The i.m. pin and 1/2 K. was the most satisfactory and the bone **plate** was the least satisfactory means of achieving healing. It was believed the bone **plates** performed less effectively because 'stress protection' (a phenomenon in which the normal physiologic stresses of bone responsible for its architecture, consequently its strength and stiffness) was markedly altered by the **plate**. Because bone **plates** assume all stresses, fractured bones underneath either heal slowly and perhaps incompletely or may atrophy from disuse because of lack of physiologic stimulation.

29/7/37 (Item 1 from file: 8) [Links](#)

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Ei Compendex(R)

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07174707 E.I. No: EIP95052723505

Title: Impulsive loading of metacarpal fracture fixation constructs

Author: Firoozbakhsh, K.K.; Guping, G.P.; Moneim, M.S.

Corporate Source: Univ of New Mexico, Albuquerque, NM, USA

Conference Title: Proceedings of the 16th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Part 1 (of 2)

Conference Location: Baltimore, MD, USA **Conference Date:** 19941103-19941106

E.I. Conference No.: 43037

Source: Annual International Conference of the IEEE Engineering in Medicine and Biology Society - Proceedings v 16 n pt 1 1994. IEEE, Piscataway, NJ, USA, 94CH3474-4. p 281-282

Publication Year: 1994

CODEN: CEMBAD **ISSN:** 0589-1019

Language: English

Document Type: CA; (Conference Article) **Treatment:** X; (Experimental)

Journal Announcement: 9507W4

Abstract: Functional capabilities of different metacarpal fixation constructs under impulsive loading, which simulates impacts in sports, were studied. One hundred twenty preserved human metacarpals underwent axial and bending impacts after oblique **osteotomy** and internal fixation. The failure occurred after 2 to 6 msec in the axial loading depending on the type of fixation, and was almost immediate in bending. The two interfragmentary lag screws was the weakest fixation in both modes of loading (P less than 0.01). Compared to the **plate** fixation, 2-screw fixation was 2.5 times weaker in axial impact and 2 times weaker in bending. The **K- wire** tension band was the second weakest fixation (P less than 0.01). The dorsal **plate** and the intramedullary rods fixations were not significantly different from the intact specimens in axial impact; they were, however, significantly weaker in bending. (Author abstract) 7 Refs.

29/7/38 (Item 1 from file: 35) [Links](#)

Dissertation Abs Online

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01391629 ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.

FIXATION OF OSTEOCHONDRAL FRACTURES WITH ADHESIVE SYSTEMS: EXPERIMENTAL STUDY

Original Title: FIJACION DE FRAGMENTOS OSTEOCONDRALES CON SISTEMAS DE ADHESION: ESTUDIO EXPERIMENTAL

Author: ARCALIS ARCE, ANTONIO

Year: 1992

Corporate Source/Institution: UNIVERSITAT AUTONOMA DE BARCELONA (SPAIN) (5852)

Source: Volume 5601C of Dissertations Abstracts International.

PAGE 137 . 223 PAGES

Language: SPANISH

ISBN: 84-7929-636-4

Publisher: SERVEI DE PUBLICACIONS DE LA UNIVERSITAT AUTONOMA DE BARCELONA, EDIFICI RECTORAT, APARTAT POSTAL 20, E-08193 BELLATERRA (BARCELONA), SPAIN

Joint fractures are the most difficult ones to treat. The accurate reduction of the different fragments is mandatory in order to obtain good functional results.

Frequently the correct position of the fragments can just be obtained through an open reduction, and it's necessary to stabilize them in order to avoid their displacement during the rehabilitation period. When the osteochondral fragments are large, the stabilization could be obtain using metal devices (**Kirschner** wires, screws, **plates**). On the contrary, when the fragments are small sized they are difficult to handle. Usually it has been proposed to use suture methods, thin **Kirschner** wires or mini screws. With these methods, the joint cartilage could be damaged or sometimes undergo a new fragmentation, which would make more difficult, or even impossible, the surgical stabilization of the fracture.

The clinical application of different adhesive methods, synthetic or biologic, in other fields, made me think about using the in the little osteochondral fragments repairing which involved the joint.

The goal of this study is the design of osteochondral fracture model that permits to study the effect of both different systems. One of them uses synthetic materials derived from cyanoacrylates, the n-butyl-2-cyanoacrylate-monomer. The other one uses an adhesive system of fibrin. We use rabbits from the New Zealand race. We practice an **osteotomy** of the knee medial condyle. The fragment is reduced and synthesized using both systems described above. We have made 24 trials in each serial, distributed in different sacrifice periods oscillating between the 1st-2nd-3rd-4th-6th and 8th week, sacrificing 4 animals in each period. The evaluation method has been: (A) Macroscopical evaluation. (B) Radiological study. (C) Histological study from pieces obtain during the described periods. The results that we obtained demonstrated the interference in the osteochondral fragment healing when we used the cyanacrylate adhesive, that only permit the bone consolidation by a proximal peripheral callus formation, remaining the synthetic product as a definitive barrier in the **osteotomy** focus. The fibrin adhesives permit an anatomical reduction and the fragment's consolidation with an accurate bone callus formation. The **osteotomy** healing is not obtained in the joint cartilage with the interposition of the adhesive synthesis. When we used the fibrin adhesive system we obtain the healing of the joint cartilage, but always persisted a little irregularity in the cartilage.

29/7/39 (Item 2 from file: 35) [Links](#)

Dissertation Abs Online

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01230926 ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.

EXTERNAL FIXATION IN FRACTURE TREATMENT

Original Title: LA FIJACION EXTERNA EN EL TRATAMIENTO DE LAS FRACTURAS

Author: CAJA LOPEZ, VICTOR LUIS

Degree: MED.D.

Year: 1990

Corporate Source/Institution: UNIVERSITAT AUTONOMA DE BARCELONA (SPAIN) (5852)

Source: Volume 5303C of Dissertations Abstracts International.

PAGE 484 . 303 PAGES

Language: SPANISH

ISBN: 84-7488-842-5

Publisher: SERVEI DE PUBLICACIONS DE LA UNIVERSITAT AUTONOMA DE BARCELONA, EDIFICI RECTORAT, APARTAT POSTAL 20, E-08193 BELLATERRA (BARCELONA), SPAIN

External fixation is one of the current orthopedic themes because of its applications in the treatment of fractures and their complications, and in **bone lengthening** in orthopedics.

This thesis proposes a biochemical study of one of these, the Monticelli-Spinelli external fixation system.

This study is composed, according to the Chao, Briggs and McCoy method, by the study of the compression stiffness (N/mm), antero-posterior and lateral bending stiffness (N mm/mm), and torsional stiffness (N mm/\$\circ\$). First, several internal fixation methods (**plate** and endomedular nail) and external fixators (Hoffmann, Wagner, Ilizarov, and Monticelli-Spinelli) are studied to define the concept of elastic external fixation and stiff external fixation, and from this information delineate the ideal behavior of a circular, elastic external fixator.

All the prototypes studied by load in an Instron universal test machine for compression and bending. This machine plots any deflection referred to its load. A Tinius Olsen machine was used to study torsional stiffness,

showing the force needed for each angle of torsion produced in the frame.

After defining the ideal mechanical characteristics of an elastic fixator in Phase 1, analytic study of the Monticelli-Spinelli external fixation system, in 26 different prototypes is used to reproduce ideal characteristics. The previously defined method is also used, adding the study of 45° oblique bending stiffness.

The study of this fixator is done in phases 2 and 3. In phase 2, the mounting architectural variables are studied (ring number ring-focus distance, ring substitution by one pin or wire on two columns). Phase 3 studies ring diameter, diameter and wire tension, number of wires, angle between wires, double sided wire mounting, axis-bars distance, angle between bars, sliding bars effect, and coupling articulation type used.

Phase 4 integrates the results of the study of these mounting variables, proposing a tibia frame of this fixator.

The results show that one of the characteristics of this fixator, the combination of tension **Kirschner** wires with pins, is useful in order to reduce the number of transfixant elements. Other mounting characteristics as ring diameter, tension and wire diameter, double-sided ring mounting, could increase the frame stiffness. The reduction to 0 in the compression stiffness is achieved by the sliding of lateral bars. (Abstract shortened by UMI.)

29/7/40 (Item 1 from file: 94) [Links](#)

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JICST-EPlus

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05858184 JICST Accession Number: 04A0543342 File Segment: JICST-E

Corrective Osteotomy for the Malunited Fracture of the Proximal Phalangeal or Metacarpal Shaft

TAZAKI KEN'ICHI (1); OKAZAKI MASATO (1); SAITO HARUKAZU (1) ; TAKAYAMA SHIN'ICHIRO (2)

(1) Ogikubo Hospital, JPN ; (2) Keio Univ., School of Medicine, JPN

Nippon Te no Geka Gakkai Zasshi (Journal of Japanese Society for Surgery of the Hand) , 2003 , VOL.20,NO.6 ,
PAGE.652-655 , FIG.4, TBL.1, REF.4

Journal Number: X0154AAV ISSN: 0910-5700

Universal Decimal Classification: 616.7-089

Language: Japanese **Country of Publication:** Japan

Document Type: Journal

Article Type: Original paper

Media Type: Printed Publication

Abstract: We have surgically treated the malunited fracture of 22 proximal phalangeal and 12 metacarpal shafts in 32 patients over the last 20 years. The surgical problems and techniques in treating these cases were reviewed. The 32 patients had a mean age of 31.3 years (9 to 69) included 19 males and 13 females: 19 suffered from malunion of the right hand and 13 the left; affecting two index, 8 middle, 11 ring, and 13 little fingers. The mean period from injury to surgery was 2.0 years (ranged from one month to 18 years and 2 months) and the preoperative period in 23 cases was less than one year. The finger overlapping in grip action resulted from rotational deformity was observed in 29 cases. After corrective **osteotomy** was carried out in the originally-fractured bone, 20 bones were internally fixed with tension band wiring (TBW), 7 bones with **Kirschner**-wires cross pinning (CP), 5 bones with mini-**plate**, and 2 bones with surgical wires following the step-cut **osteotomy** (SCO). In a case treated initially with TBW, an additional operation of wire removal and fixation with a **plate** was performed because of delayed union. In another case treated with mini-**plate**, secondary surgery with SCO was carried out for lack of rotational correction. Follow-up studies performed an average of 8.6 months (2 to 26 months) later showed satisfactory results in all cases excluding the cases of preoperatively contracted finger. Grip strength averaged 82.6% (43 to 98%) on the contralateral side and the range of motion averaged 92.9% of normal TAM. The TBW method is most reliable among surgical techniques for several advantages: 1) the shaft is cut only with a simple, conventional wedge **osteotomy**; 2) correction of both flexion deformity and rotational deformity can be carried out at the same time; and

3) correction adjustments can be performed more easily and more precisely without special instruments or equipments. (author abst.)

29/7/41 (Item 2 from file: 94) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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05436134 JICST Accession Number: 03A0257642 File Segment: JICST-E

Effect of external fixation for Rolando's fracture.

HATTORI MIKHIKO (1); SAWAIZUMI TAKUYA (1); ITO HIROMOTO (1)

(1) Nihon'idai Byoin Seikeigeka

Nihon Sogai Kotei. Hone Encho Gakkai Zasshi (Journal of the Japanese Association of External Fixation and Limb Lengthening) , 2003 , VOL.14 , PAGE.37-41 , FIG.4, TBL.3, REF.7

Journal Number: L0814ABH ISSN: 1342-3495

Universal Decimal Classification: 616.7-089

Language: Japanese Country of Publication: Japan

Document Type: Journal

Article Type: Original paper

Media Type: Printed Publication

Abstract: The treatment results for the 14 patients with Rolando's fractures, who could be followed-up, were examined and analyzed. External fixation was used for a total of 8 patients: external fixation alone for 2 patients, and external fixation combined with **Kirschner** wire fixation for 6. For the remaining 6 patients, external fixation was not used: **Kirschner** wire fixation alone for 5 patients and **plate** fixation combined with **Kirschner** wire fixation for 1 patient. The treatment results, according to Saito's criteria, for the 8 patients with external fixation were "excellent" for 5 patients and "good" for 3, while those for the 6 patients without external fixation were "excellent" for 2 patients, "good" for 3, and "fair" for 1 patient. Comparison of postoperative X-rays showed that while gap formation on the articular surface and **shortening** of the **metacarpal bone** were not seen in any of the patients with external fixation, they were seen in 4 of the 6 patients without external fixation. Poor intraoperative reduction of these elements reflected in poor treatment results. Therefore, external fixation was shown to be a useful method because traction and its maintenance are easy to perform, **shortening** of the **metacarpal bone** can be prevented, and consequently reduction of the articular surface is easy to perform. (author abst.)

29/7/43 (Item 4 from file: 94) [Links](#)

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04594615 JICST Accession Number: 00A0365417 File Segment: JICST-E

Distal Radius Plate Fixation for Dorsally Displaced Fractures.

SAKAI KAZUHIRO (1); OGASA HIROYOSHI (1); MURATA KAZUHIRO (1); KAJIYAMA SHIRO (1);
AZUMA EIJI (1)

(1) Yamaguchi Central Hosp.

Nippon Te no Geka Gakkai Zasshi (Journal of Japanese Society for Surgery of the Hand) , 2000 , VOL.16,NO.6 ,
PAGE.844-848 , FIG.4, REF.6

Journal Number: X0154AAV ISSN: 0910-5700

Universal Decimal Classification: 616.7-089 615.472/.473

Language: Japanese **Country of Publication:** Japan

Document Type: Journal

Article Type: Short Communication

Media Type: Printed Publication

Abstract: Recently, several new **plates** for dorsal fixation of the distal radius were developed, and were used for fourteen patients in our-clinic. Eleven fresh dorsally displaced unstable distal radius fractures, including seven fractures with intra-articular extension, and three malunited fractures were treated. Five **ACE plates** and six **AO plates** were used for fresh fractures, and three **ACE plates** were used for malunited fractures. Additional procedures were performed on four fresh fractures, three simultaneous hydroxyapatite grafts and one supplementary **Kirschner** wire fixation, and also performed on all malunited fractures, **osteotomy**, and iliac bone grafts. The average periods of postoperative plaster fixation were 3.3 weeks in patients with **ACE plates** and 2.4 weeks in **AO plates** for fresh fractures, and 2.3 weeks in **ACE plates** for malunited fractures. Early mobilization was possible without any severe complications, such as delayed union, tendon rupture or neurovascular disorders. The range of wrist motion at the time of follow-up was satisfactory, with minimal disturbance of flexion, extension, and ulnar deviation. On radiogram, accurate reduction was obtained in most fractures, except three fresh fractures with two **radius shortening** and one loss of volar tilt. In addition, **radius shortening** aggravation occurred in two fresh fractures within a few postoperative weeks. One cause was probably the technical difficulty in stabilizing the distal fragments, although simultaneous bone grafts were helpful. In conclusion, compared with external fixation which is most common treatment method, **plate** fixation offers such advantages as early return to active life and simple post-operative care. However, technical difficulty is a problem which must be resolved. (author abst.)

29/7/46 (Item 2 from file: 34) [Links](#)

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SciSearch(R) Cited Ref Sci

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09006083 **Genuine Article#:** 355LK **Number of References:** 34

Composite fixation for acetabular fractures in dogs

Author: Halling KB (REPRINT) ; Lewis DD; Cross AR; Beaver DP; Lanz OI; Stubbs WP

Corporate Source: UNIV FLORIDA,COLL VET MED, DEPT SMALL ANIM CLIN

SCI/GAINESVILLE//FL/32610 (REPRINT); UNIV FLORIDA,COLL VET MED, CTR VET SPORTS

MED/GAINESVILLE//FL/32610; VIRGINIA POLYTECH INST & STATE UNIV,VIRGINIA MARYLAND REG

COLL VET MED, VIRGINIA TECH INST/BLACKSBURG//VA/24061; AFFILIATED VET

SPECIALISTS,/ORANGE PK//FL/; ALAMEDA E VET HOSP,/DENVER//CO/

Journal: COMPENDIUM ON CONTINUING EDUCATION FOR THE PRACTICING VETERINARIAN , 2000 , V 22 , N9 (SEP) , P 803-&

ISSN: 0193-1903 **Publication date:** 20000900

Publisher: VETERINARY LEARNING SYSTEMS , 425 PHILLIPS BLVD #100, TRENTON, NJ 08618

Language: English **Document Type:** ARTICLE

Abstract: The optimal clinical outcome of acetabular fractures depends on precise anatomic reduction and rigid internal fixation. Although bone plating has traditionally been the most commonly used method of stabilizing acetabular fractures in dogs, difficulty contouring the **plate** and maintaining adequate fracture reduction has prompted the development of alternative techniques. A composite fixation technique that uses screws, **Kirschner** wires, stainless-steel orthopedic wire. and polymethylmethacrylate (PMMA) has been used to stabilize acetabular fractures. By achieving accurate anatomic reduction and sufficient biomechanic stability, screw/wire/PMMA composite fixation has proven successful in **repairing acetabular fractures** in dogs. This paper describes the

application of and clinical results associated with this technique. The results of our experimental evaluation of bone plates versus composite fixation, composite fixation with and without PMMA, and composite fixation with and without ancillary **Kirschner** wires are also discussed.

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40/7/1 (Item 1 from file: 155) [Links](#)

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MEDLINE(R)

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13152102 **PMID:** 11269810

Wagner multiple K-wire osteosynthesis to correct coxa vara in the young child: experience with a versatile 'tailor-made' high angle blade plate equivalent.

Widmann R F; Hresko M T; Kasser J R; Millis M B

Division of Pediatric Orthopaedic Surgery, Hospital for Special Surgery, Cornell University Medical Center, New York, New York, USA.

Journal of pediatric orthopaedics. Part B / European Paediatric Orthopaedic Society, Pediatric Orthopaedic Society of North America (United States) Jan 2001 , 10 (1) p43-50 , ISSN: 1060-152X--Print **Journal Code:** 9300904
Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In 1978, Wagner described a technique using multiple **Kirschner wires (K-wires)** to stabilize an intertrochanteric **osteotomy** performed for the correction of coxa vara in small children. Multiple **K-wires** are used to create a custom high-angle blade **plate** for valgus **osteotomy**. The authors have evaluated a retrospective series of 17 Wagner intertrochanteric **osteotomies** that were performed in 10 children with coxa vara between the ages of 1 year and 8 years. The neck-shaft angle was corrected from 93.5 degrees to 129.5 degrees at long-term follow-up, and the Hilgenreiner epiphyseal angle was corrected from 71 degrees to 37.6 degrees at long-term follow-up. Revision surgery was performed on five hips with inadequate initial surgical correction. Complications included a single **broken K- wire**, a **femur fracture** after hardware **removal**, and one hip developed avascular necrosis postoperatively.

Record Date Created: 20010328

Record Date Completed: 20010726

40/7/2 (Item 2 from file: 155) [Links](#)

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MEDLINE(R)

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11688800 **PMID:** 9486727

Results of opening-wedge osteotomy for the treatment of a post-traumatic varus deformity of the ankle.

Takakura Y; Takaoka T; Tanaka Y; Yajima H; Tamai S

Department of Orthopaedic Surgery, Nara Medical University, Kashihara, Japan. takanori@sikasenbey.or.jp

Journal of bone and joint surgery. American volume (UNITED STATES) Feb 1998 , 80 (2) p213-8 , ISSN: 0021-9355--Print **Journal Code:** 0014030

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

We performed a one-stage opening-wedge valgus **osteotomy** in nine patients to correct a post-traumatic progressive varus deformity of the ankle. The **osteotomy** site was stabilized with two, three, or four **Kirschner** wires or with a **plate** and screws (in one patient). The site of the **osteotomy** united within two months after the operation in eight patients and at six months in one patient who was fifty-nine years old. The average duration of follow-up was seven years and four months (range, two years and four months to thirteen years and two months). Postoperatively, the range of motion of the ankle was decreased in six patients and remained unchanged in three. However, none of the patients reported any limitation in the activities of daily living, and the four adolescent patients were able to participate in sports activities. The result was graded as excellent for four ankles, good for two, and fair for three.

Record Date Created: 19980312

Record Date Completed: 19980312

40/7/4 (Item 4 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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11141153 **PMID:** 8969432

A comparative mechanical analysis of plate fixation in a proximal phalangeal fracture model.

Lins R E; Myers B S; Spinner R J; Levin L S

Hand Treatment Center, Atlanta, GA 30342, USA.

Journal of hand surgery (UNITED STATES) Nov 1996 , 21 (6) p1059-64 , ISSN: 0363-5023--Print **Journal Code:** 7609631

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

A biomechanical study compared the mechanical properties of hand and craniofacial plating systems commonly used in proximal phalangeal fractures. Two **plates** of each of the various systems were mounted dorsally on a yellow-birch-dowel model of a proximal phalanx after a transverse cut was made in the middle of the section of the dowel, modeling a midshaft transverse **osteotomy** or fracture. Torsional rigidity, as well as four-point bending rigidity in apex dorsal, lateral and volar directions, was achieved. Failure testing in apex palmar four-point bending was then examined. Between plating systems, torsion varied 1,600% and results of apex palmar testing varied 1,500%. Apex palmar moment-to-failure testing varied 1,000% and represented a 3.5%-38% range of intact proximal phalangeal strength. This also represented 12%-128% of the maximum calculated in vivo bending moments of the proximal phalanx. The wide variation in **plate** strengths and stiffness raises questions as to the suitability of certain plating systems with regard to early mobilization. Moreover, some plating systems tested were mechanically weaker than the reported strengths of certain **Kirschner** wire fixation techniques.

Record Date Created: 19970318

Record Date Completed: 19970318

40/7/5 (Item 5 from file: 155) [Links](#)

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MEDLINE(R)

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09158545 **PMID:** 8701691

[Intra-articular fractures of the distal humerus]

Intraartikularne frakture distalnega humerusa.

Smrkolj V; Korosec B

Travmatoloska klinika, Univerzitetni klinicni center v Ljubljani.

Acta chirurgica Iugoslavica (YUGOSLAVIA) 1991 , 38 (1) p69-75 , ISSN: 0354-950X--Print **Journal Code:** 0372631

Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: SLOVENE

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The authors analysed 79 patients with intraarticular fracture of the distal end of the humerus, treated during the past 5 years. Seventeen patients were treated by conservative methods, and 62 by surgery. Of the latter, 23 required emergency operations. In the majority of cases, open reduction was accomplished by special **plates** for the distal end of the humerus and by **Y-plates**. Screws, **Kirschner** wires and suture of bone fragments were rarely used. The most frequently employed approach was **osteotomy** of the olecranon. The results were excellent, except in 13 patients.

Record Date Created: 19960904

Record Date Completed: 19960904

40/7/6 (Item 6 from file: 155) [Links](#)

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MEDLINE(R)

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08878088 **PMID:** 2067880

Metacarpal and phalangeal osteotomy with miniplate fixation.

Sanders R A; Frederick H A

Hughston Orthopaedic Clinic, PC, Columbus, Georgia.

Orthopaedic review (UNITED STATES) May 1991 , 20 (5) p449-56 , ISSN: 0094-6591--Print **Journal Code:** 0431766

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

We reviewed the results of corrective osteotomies performed with power tools for symptomatic malunions of **metacarpal** and **phalangeal fractures** in 10 patients. At an average follow-up of 30 months, all patients had a healed **osteotomy** with correct alignment and had an average increase of 30 degrees in the flexion arc of the involved digit. We recommend a surgical technique of miniplate fixation over **K- wire** fixation where possible; it allows precise, intraoperative correction and rigid stabilization. A shortened immobilization time and early motion are significant advantages of **plate** fixation. However, **plates** cannot be used across open growth **plates** or directly over areas of tendon insertion. A careful preoperative plan should always be prepared prior to any corrective **osteotomy**. Problems such as post-operative tendinous adhesions did not occur, nor did nonunions or delayed unions.

Record Date Created: 19910815

Record Date Completed: 19910815

40/7/7 (Item 7 from file: 155) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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08466856 **PMID:** 2347166

Experimental tibial fractures in rabbits simulating proximal tibial metaphyseal fractures in children.

Aronson D D; Stewart M C; Crissman J D

Department of Orthopaedic Surgery, Children's Hospital, Wayne State University School of Medicine, Detroit, Michigan 48201.

Clinical orthopaedics and related research (UNITED STATES) Jun 1990 , (255) p61-7 , ISSN:

0009-921X--Print **Journal Code:** 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The etiology of valgus deformity after a seemingly innocuous **fracture** of the proximal **tibial** metaphysis in children is unknown. The purpose of this work was to identify the etiology of this deformity using a rabbit model.

Twenty-two eight-week-old rabbits were divided into two groups. In Group I, the medial periosteum was excised from the left proximal tibial metaphysis. A partial **osteotomy** was created 5 mm distal to the epiphyseal **plate**, involving the medial one-half of the tibial metaphysis. Two 0.7-mm **Kirschner** wires were placed as markers on each side of the **osteotomy**. In Group II, the identical procedure was performed from the lateral side. Standard roentgenograms were obtained postoperatively and weekly until death by sodium pentobarbital overdose at six weeks. The angular deformity, medial growth, and lateral growth were calculated from the markers on the roentgenograms. All tibias were decalcified and analyzed under light microscopy. In Group I, all 11 rabbits developed valgus deformity averaging 12.2 degrees; asymmetric growth was statistically significant. In Group II, ten of 11 rabbits developed varus deformity averaging 9.8 degrees; asymmetric growth was not statistically significant. Despite obvious asymmetric growth in both groups, light microscopy failed to reveal any asymmetry of the physis. Valgus and varus deformities are secondary to asymmetric growth, which is not demonstrable by light microscopy.

Record Date Created: 19900706

Record Date Completed: 19900706

40/7/8 (Item 8 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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08106914 **PMID:** 2500791

[Treatment of extra-articular malunited fractures of the distal radius using osteotomy with interposition of a graft]

Traitement des cals vicieux extra-articulaires du radius distal par **osteotomie** d'ouverture avec interposition d'une greffe.

Chamay A; Rodriguez-Meythiaz A M

Zeitschrift fur Unfallchirurgie, Versicherungsmedizin und Berufskrankheiten - offizielles Organ der Schweizerischen Gesellschaft fur Unfallmedizin und Berufskrankheiten = Revue de traumatologie, d'assicurologie et des maladies professionnelles - organe officiel de la Societe suisse de medecine des accidents et des maladies professionnelles (SWITZERLAND) 1989 , 82 (1) p49-61 , ISSN: 0254-6310--Print **Journal Code:** 8304632
Publishing Model Print

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Malunited fractures of the distal end of the radius are corrected by an **osteotomy** transversely oriented at the level of the angulation (15 cases reported). After correction of the deformation (length and angulation) compact iliac bone graft is inserted. 5 malunited **fractures** with a **volar** deformation were corrected by a palmar surgical approach and AO-T-**plate** fixation. 8 cases with a dorsal displacement were corrected by a dorso-lateral surgical approach and fixed with **K-wires** (7 cases) and without any internal fixation (1 case). 2 cases with dorsal displacement were corrected by a palmar approach and AO-**plate** fixation. Clinical and radiological results are good, except one case with secondary displacement and malunion which needed an ulnar head resection and the other, in which the **radius** was not enough **lengthened**, and needed the ulnar to be shortened.

Record Date Created: 19890801

Record Date Completed: 19890801

40/7/9 (Item 9 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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07908054 **PMID:** 3271005

Trapezoidal osteotomy of the distal radius for unacceptable articular angulation after Colles' fracture.

Watson H K; Castle T H

Connecticut Combined Hand Service, Hartford.

Journal of hand surgery (UNITED STATES) Nov 1988 , 13 (6) p837-43 , ISSN: 0363-5023--Print **Journal Code:** 7609631

Publishing Model Print; Comment in J Hand Surg [Am]. 1989 Sep;14(5) 917; Comment in PMID 2794420

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Loss of radial palmar tilt in malunion of Colles' fractures alters wrist biomechanics, abnormally loading the tenuous dorsal ligament complex. This can result in midcarpal instability with synovitis, pain, weakness, and possible articular degeneration. An **osteotomy** to correct radius alignment using a trapezoidal corticocancellous bone graft has been devised. The graft is harvested from the dorsal radius adjacent to the **osteotomy** and malunion site. When turned 90 degrees, a properly designed trapezoidal graft restores radial length, inclination, and palmar tilt in one step. Functional results in 15 patients at 46 months (range, 18 to 116) were comparable with a series using iliac crest graft and **plate**- and-screw fixation. This simple technique avoids disruption of the extensor retinaculum and reoperation for hardware removal as **Kirschner**-wire fixation proved adequate.

Record Date Created: 19890328

Record Date Completed: 19890328

40/7/13 (Item 3 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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06188800 **EMBASE No:** 1995225805

Osteosynthesis by intrafocal pins of anteriorly displaced fractures of the lower radial epiphysis

OSTEOSYNTHESE PAR BROCHES INTRA-FOCALES DES FRACTURES A DEPLACEMENT ANTERIEUR
DE L'EPIPHYSE RADIALE INFERIEURE

Hoel G.; Kapandji A.I.; Katz D.

Clinique de l'Yvette, 43, route de Corbeil, 91160 Longjumeau France

Annales de Chirurgie de la Main et du Membre Superieur (ANN. CHIR. MAIN MEMB. SUPER.) (France) 1995
, 14/3 (142-157)

CODEN: AMSPE **ISSN:** 0753-9053

Document Type: Journal ; Article

Language: FRENCH **Summary Language:** ENGLISH; FRENCH

The authors describe two anterior approaches to intra-focal pinning of distal **radius fractures**, with anterior tilt, Smith type and anterior margin type. They demonstrate that this fixation mode is as reliable as anterior **plate** osteosynthesis, with less anatomic cost. It allows immediate mobilization and affords good functional results. Performed with regular **K. Wire** or better with << Arum >> Pins, this procedure was used in ten Smith's fractures, six anterior margin fractures, one two-margins fractures, and twelve multi-fragment fractures. Anterior pins are also used when excessive anterior reduction is feared in Colle's fractures. Secondary displacements are rare, except **radius shortening** which is possible with all types of fracture and treatment. As cast is prohibited, early rehabilitation provides good and excellent functional results. Complications are exceptional, occurring at the beginning of the authors' experience. Thanks to some precaution, such as the << open approach >> and protecting the pin ends, this technique is simple, reliable, economic and effective.

40/7/14 (Item 4 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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05869966 **EMBASE No:** 1994274065

The differentiated management regimen of distal fractures of the radius

DIE DIFFERENZIERTE BEHANDLUNG DISTALER RADIUSFRAKTUREN

Oestern H.-J.; Huls E.

Klinik für Unfall- und Wiederherstellungschirurgie, allgemeines Krankenhaus, Siemenplatz 4, 29223 Celle
Germany

Zentralblatt für Chirurgie (ZENTRALBL. CHIR.) (Germany) 1994 , 119/8 (521-532)

CODEN: ZECHA **ISSN:** 0044-409X

Document Type: Journal ; Review

Language: GERMAN **Summary Language:** ENGLISH; GERMAN

Treatment of distal **fractures** of the **radius** has undergone considerable change during recent years. The cause for this lies primarily in the poor results of conservative treatments. In addition to **osseous** instability, the **fractures** of the **radius** are frequently combined with ligamentary instability as well, thereby exceeding the ability of conservative treatment. Among the many classifications, the AO classification of these fractures has proven to be the best and most widely accepted. This classification allows the recommendation of suitable procedures of treatment. The problem with inadequately healed **fractures** of the **radius** lies in the inherent unphysiological loading of the joint in the characteristic dorsal tilted position. This leads to a pathological displacement of the radius of flexion and extension and thereby to an overloading of the dorsal joint cartilage. The **shortening** of the **radius** leads to a mechanical impingement of the triangular fibrocartilagenous complex. The **Kirschner** wire fixation is particularly indicated in type A and type C fractures when combined with an external fixator. Of great importance here is the crossing of the **K-wires**, best accomplished by inserting an additional wire in a proximal to distal direction to achieve maximal mechanical stability. Biodegradable fixation devices are not yet in widespread use, as high costs and possible foreign body reactions have prevented their acceptance. The **plate** osteosynthesis has its domain in the treatment of **volar** luxation **fractures** (B3) and the partially articular **fractures** of the **radius** (B2). The domain of the external fixator, on the other hand, lies in the C2 and C3 fractures in combination with the **K-wire** osteosynthesis. Changing the mode of treatment to a **plate** osteosynthesis after two to three weeks allows a functional postoperative treatment. By use of a differentiated treatment regimen, the complication rate can be significantly reduced whose cause frequently lies in repeatedly attempted repositions. Nevertheless, a rupture of the tendon of the M. extensor pollicis longus takes place in a certain percentage of cases (less than 0.2%) due to the unusual vascularization of this tendon. The dystrophy of Sudeck has become a relatively rare occurrence. A connection between a compression syndrome of the median nerve and the dystrophy of Sudeck has been discussed. The differentiated management has led to a change from a purely conservative treatment to a more varied treatment of the **fractures** of the distal **radius**. In our own patients conservative treatment was carried out in 27.5%.

40/7/15 (Item 5 from file: 73) [Links](#)

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02920784 EMBASE No: 1985114743

Arthromyolysis, osteotomy and osteosynthesis in axially deviated stiff knees

ARTROMIOLISI, OSTEOTOMIA E SINTESI STABILE NEL GINOCCHIO RIGIDO CON DEVIAZIONE ASSIALE

Silvello L.; Malossini L.; Scarponi R.

Ospedale Niguarda-Ca' Granda - Milano, I Divisione di Ortopedia e Traumatologia 'Passera', Milano Italy

Minerva Ortopedica (MINERVA ORTOP.) (Italy) 1985 , 36/1-2 (11-13)

CODEN: MIORA

Document Type: Journal

Language: ITALIAN **Summary Language:** ENGLISH

The cases are reported of two young patients with supracondyloid **fractures** of the **femur**, given osteosynthesis using a Judet **plate** and **Kirschner** wires, after which both presented functional limitations and an axial deviation. The surgical protocol used to correct the postoperative stiffness is then described i.e. lysis of the capsule and associated musculature together with **osteotomy** to correct the varus and extension defects.

40/7/16 (Item 6 from file: 73) [Links](#)

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02154084 EMBASE No: 1982133220

A phalangeal fracture model - Quantitative analysis of rigidity and failure

Massengill J.B.; Alexander H.; Langrana N.; Mylod A.

Coll. Med. Dent. New Jersey, New Jersey Med. Sch., Newark, NJ United States

Journal of Hand Surgery (J. HAND SURG.) (United States) 1982 , 7/3 (264-270)

CODEN: JHSUD

Document Type: Journal

Language: ENGLISH

Nine types of internal fixation techniques were tested in 4-point bending using a pig **metacarpal** model for phalangeal **fractures**. Levels of bending rigidity and bending moments at failure were determined, and the modes of failure are described. **Plate** and screw fixation afforded the greatest rigidity, and epiphyseal fractures occurred, leaving intact the test section. Flexible wire loop fixation failed by wire **cutting** into **bone** when a square knot was used. Twisted wire unraveled when placed in tension. Depending on the fracture type and the wire placement, **Kirschner** wires failed either by slipping in the bone, twisting in the bone cortex, or bending at the bone cortex interface. Rigidity varied widely depending on the way in which the wires were employed.

40/7/17 (Item 7 from file: 73) [Links](#)

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01473451 EMBASE No: 1979194474

Operative correction of malunion of distal fractures of the radius

DER SEKUNDARE KORREKTUREINGRIFF AM DISTALEN RADIUS BEI POSTTRAUMATISCHER FEHLSTELLUNG

Mueller-Faerber J.; Griebel W.

Chir. Univ. Klin., Berufsgenossenschaft. Krankenanst. Bergmannsheil, Bochum Germany

Unfallheilkunde/Traumatology (UNFALLHEILKUNDE TRAUMATOL.) (Germany) 1979 , 82/1 (23-28)

CODEN: UNFAD

Document Type: Journal

Language: GERMAN **Summary Language:** ENGLISH

Posttraumatic malunion usually results from incorrect treatment of a Colles fracture. This paper deals in detail with the pathogenesis of this condition and with the indication for, and technique of, corrective **osteotomy**. The misalignment is corrected by open wedge **osteotomy** of the distal end of the radius, insertion of a small cortico-cancellous bone graft, and internal fixation. By using this technique it is usually possible to avoid additional resection of the distal ulna. The surgical approach may be dorsal or volar and is determined by the type of dislocation **K-wires** used to be used for internal fixation but have been found to provide insufficient stability. The

small-fragment T-plate offers much stabler fixation and makes early active movement possible. The results of corrective osteotomy, which are illustrated by reports of 15 cases, have been found to be satisfactory.

40/7/18 (Item 8 from file: 73) [Links](#)

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00299280 EMBASE No: 1975071604

A new technique of compression plate fixation for the skeleton of the hand

EINE NEUE TECHNIK ZUR DRUCKOSTEOSYNTHESE IM BEREICH DES HANDSKELETS

Bencivenga A.

Chir. Traumatol. Abt., Staat. Allg. Krankenh., Mogadiscio Somalia

Chirurg (CHIRURG) 1974 , 45/7 (327-329)

CODEN: CHIRA

Document Type: Journal

Language: GERMAN

Interfragmentary pressure in fractures treatment provides for exercise stable fixation and per primam healing of the fractures. Lack of space in the operation field in fractures of the hand and scanty thickness of the pressure plates for the hand skeleton make the use of interfragmentary pressure in the treatment of fractures of the small bones of the hand impossible. A method to obtain reposition of the fracture under pressure is described, followed by installation of the pressure plate, so an exercise stable fixation is achieved. No instruments are needed to keep the fracture pieces in place during fixation of the pressure plate, which is extremely advantageous in the case of fractures of the hand. The method can also be used in case of infection of the fracture site. In 12 patients the method was used with success (9 metacarpal fractures, 1 metatarsal fracture, 2 arthrodeses carpo metacarpal first ray). On both sides of the fracture a K wire (1 1/2 mm. thick) is drilled in the bone. Two miniature clamps are fixed on the wires. A nut on a screwthread in the clamp near the bone provides interfragmentary pressure, the other clamp provides centrifugal pressure that keeps the K wire in alignment. After the reposition the plate is fixed by screws to obtain pressure on the plate. (Heybroek - Groningen)

40/7/19 (Item 1 from file: 5) [Links](#)

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0004682867 Biosis No.: 198579101766

OSTEOSYNTHESIS WITH DOGS AND CATS IN THE YEAR 1983

Author: BANIC J (Reprint); KOGOVSEK J; SUBELJ J

Author Address: VTOZD ZA VET BF, CESTA V MESTNI LOG 47, 61000

LJUBLJANA**CZECHOSLOVAKIA

Journal: Zbornik Biotehniske Fakultete Univerze Edvarda Kardelja v Ljubljani Veterinarstvo 21 (1): p 135-144
1984

ISSN: 0300-0362

Document Type: Article
Record Type: Abstract
Language: SLOVENIAN

Abstract: In 1983, 204 **bone fractures** were diagnosed in 178 dogs and 70 in 59 cats. In dogs 155 fractures were treated (114 conservatively and 41 operatively) in cats. In cats 39 fractures were treated (27 conservatively and 12 operatively). Euthanasia was performed with 34 dogs (19%) and 16 cats (23%). Later results of treatment of dogs were researched in more detail. Osteosynthesis in dogs was performed in 13 cases with a compression or neutralization **plate**, in 10 cases with screws in 4 cases with the Kuntscher nail, in 3 cases with the Steinmann needle, in 3 cases with the **Kirschner** wire after Hackethal, in 2 cases with the **Kirschner** wire alone, and once with screws and cerclage (the **Kirschner** wire and cerclage, or the Kirschner wire and tension-wire). With 3 **fractures** of the **femoral** neck or head, the head was removed. Later results were established by control examination, by inquiry and telephone. Osteosynthesis with the **plate** proved very satisfactory on the tibia, humerus and mandibula. On the femur in 3 osteosyntheses with a **plate** osteomyelitis was observed, which is the worst problem at present. Very satisfactory results were achieved with screws alone, as well as with the Kuntscher nail and Steinmann needle; less satisfactory ones with the **Kirschner** wire, either alone or in combination with cerclage. With cats osteosynthesis was performed with the Kuntscher nail 4 times after Hacketha, 3 times with the **Kirschner** wire and the tension-wire or the cerclage but once. Twice the head of **femur** was **removed**.

40/7/20 (Item 1 from file: 35) [Links](#)

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A COMPARISON OF BONE HEALING IN THE DOG AFTER FIXATION OF TIBIAL OSTEOTOMIES WITH A MODIFIED MENNEN PLATE AND THE HALF KIRSCHNER SPLINT. (AFRIKAANS TEXT)

Author: COETZEE, GERT LOUIS

Degree: M.MED.VET.

Year: 1988

Corporate Source/Institution: UNIVERSITY OF PRETORIA (SOUTH AFRICA) (6004)

CO-SUPERVISORS: S. W. T. PETRICK; C. J. ROOS

Source: Volume 27/02 of MASTERS ABSTRACTS. of Dissertations Abstracts International.

PAGE 237 .

Literature concerning the causes of delayed bone healing in distal canine **tibial** diaphyseal **fractures**, is reviewed. Attention is given to the importance of bone healing by callus formation in the absence of rigid fixation, as well as the normal bone healing process pertaining to radiological examination. The use of radionuclides as an auxilliary diagnostic aid to evaluate the activity of bone healing, is also presented.

Thirteen Beagle dogs were used in this research project. Transverse distal tibial diaphyseal **osteotomies** were performed in the left and later in the right hindleg of each animal. Bone healing was compared after fixation with a modified Mennen **plate** in combination with an intramedullary Steinmann pin and fixation with the half **Kirschner** splint in combination with an intramedullary Steinmann pin.

The modified Mennen **plate** in combination with an intramedullary Steinmann pin revealed excellent clinical application possibilities.

40/7/21 (Item 1 from file: 94) [Links](#)

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05493326 JICST Accession Number: 03A0476123 File Segment: JICST-E

Chronic fracture-dislocation of the proximal interphalangeal joint

ISHIDA OSAMU (1); OCHI MITSUO (1)

(1) Hiroshima Univ., Graduate School, JPN

Kansetsu Geka (Journal of Joint Surgery) , 2003 , VOL.22,NO.7 , PAGE.867-872 , FIG.10, TBL.1, REF.8

Journal Number: S0169BAB ISSN: 0286-5394

Universal Decimal Classification: 616.7-089

Language: Japanese Country of Publication: Japan

Document Type: Journal

Article Type: Commentary

Media Type: Printed Publication

Abstract: It is difficult to treat in chronic fracture-dislocation of the proximal interphalangeal joint. There are various reports on the treatment of PIP joint dorsal dislocation fracture. In the chronic case, **osteotomy** of the malunited **fracture** is performed and **bone graft** is used jointly. Osteochondral graft is carried out case by case. Palmar approach is selected for surgery. **Osteotomy** is performed, bone particles are reduced, and it is fixed with **Kirschner wire**. Volar **plate** arthroplasty in case of the cartilage defect occurred in the articular facet is described. Osteochondral grafting is outlined. Criterion of the treatment is shown in table. Decision is made into the points of range of motion, pain, deformation, instability, ADL failure and X-ray evaluation. Osteochondral graft is carried out for only 2 cases, but it can be a therapy changed from volar **plate** arthroplasty. Case of a male infant of 9-year-old is presented.

40/7/22 (Item 2 from file: 94) [Links](#)

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04448661 JICST Accession Number: 99A0669216 File Segment: JICST-E

Humeral Supracondylar Wedge Osteotomy for Cubitus Varus in Children.

SATO MINAKO (1); KOSHINO TOMIHISA (1); SAITO TOMOYUKI (1); TAKAGI TOSHITAKA (1)

(1) Yokohama City Univ., Sch. of Med.

Nippon Shoni Seikei Geka Gakkai Zasshi (Journal of Japanese Paediatric Orthopaedic Association) , 1999 , VOL.8,NO.2 , PAGE.145-148 , FIG.3, TBL.1, REF.8

Journal Number: L1281AAL ISSN: 0917-6950

Universal Decimal Classification: 616.7-089

Language: Japanese Country of Publication: Japan

Document Type: Journal

Article Type: Original paper

Media Type: Printed Publication

Abstract: Cubitus varus deformity after trauma is one of the commonest complications of supracondylar fracture in children. A surgical treatment is sometimes needed for correcting this deformity. To decide the suitable fixation method after **osteotomy** for children, we investigated the outcomes of **osteotomy** with various kinds of fixations.

We did humeral supracondylar wedge **osteotomy** on 13 elbows of 13 children to correct cubitus varus deformity after **humeral fracture**. Previous reports suggested that operation when the patient is in the low teens gives vigorous bone remodeling and rapid bone union. We operated on nine boys and four girls between 1980 and 1996. Their mean age at surgery was 13 years (range, 7 to 19 years). Fixation after opening-wedge **osteotomy** was done with **Kirschner** wires with cross-wiring technique in seven elbows, **AO plate** in one elbow, and dual dynamic compression **plates**(DCP) in one elbow; French closing-wedge **osteotomy** was used for four elbows. At a mean follow-up time of 5 years (0.5 to 13 years), the mean carrying angle improved by -17.4.DEG. to 4.3.DEG., and all of the elbows maintained a flexion range of more than 120.DEG.. Results in five of the 12 elbows were rated excellent and results in seven elbows were rated good by the grading system of Mitchell and Adams. We concluded that cross-wiring fixation with **Kirschner** wires was a reliable technique for stabilization after **osteotomy** for children. (author abst.)

40/7/24 (Item 1 from file: 34) [Links](#)

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07625793 **Genuine Article#**: 188UR **Number of References**: 9

Temporary external fixation in correction of non articular mal-unions of the distal radius

Author: Voche P (REPRINT) ; Dautel G; Dap F; Merle M; Ninou M

Corporate Source: 18 RUE PRE DELLE,/F-38240 MEYLAN//FRANCE/ (REPRINT); CHRU NANCY,HOP JEANNE ARC, SERV CHIRURG PLAST & RECONSTRUCTRICE APPAREIL LOC/F-54201 TOUL//FRANCE/

Journal: REVUE DE CHIRURGIE ORTHOPEDIQUE ET REPARATRICE DE L APPAREIL MOTEUR , 1999 , V 85 , N1 (MAR) , P 18-23

ISSN: 0035-1040 **Publication date**: 19990300

Publisher: MASSON EDITEUR , 120 BLVD SAINT-GERMAIN, 75280 PARIS 06, FRANCE

Language: French **Document Type**: ARTICLE

Abstract: Purpose of the study The authors reviewed 21 cases of extra articular malunions of the distal radius treated by **osteotomy**, temporary external fixation, then osteosynthesis. Two groups were studied: Group A of 14 patients with dorsal tilt of the distal radius and Group B of 7 patients with palmar tilt of the distal radius. Mean follow-up of this series was 69 months ranged from 12 to 109 months.

Material and methods In Group A, after exposure of the distal radius through a dorsal approach, the site of **osteotomy**, proximal to the distal radio-ulnar joint, was determined by fluoroscopy. The angular correction was done by progressive opening using a small external fixator. After checking on the correction, the bone graft was harvested 7 times on the radius as described by Watson et Castle, 7 times on the iliac crest. Bone fixation was done by two **K-wires** and a cast for 8 to 10 weeks. Three Sauve-Kapandji procedures was done at the same time. In Group B, the approach was palmar, extended distally to open the carpal tunnel, The distraction was done with a distal **T-shaped** external fixator. The **bone graft** was always harvested on the iliac crest. Bone fixation was done with a **T-shaped** palmar **plate**. Two Sauve-Kapandji procedures was done at the same time.

Results Group A: Flexion-extension are was improved of 15,5 p. 100, pronation-supination of 83,7 p. 100 and grip strength of 80 per cent of the pre-operative values. Radiological evaluation showed good correction except one case of undercorrection of the dorsal tilt (- 7 degrees) and one case of undercorrection of the radial inclination (+ 6 degrees). The distal radio-ulnar index was measured at the mean of 0mm postoperatively compared to + 5 mm pre-operatively. One patient developed a postoperative radiocarpal arthritis. Group B: Flexion-extension are was

improved of 96,2 p. 100, pronation-supination of 76,9 p. 100 and grip strength of 108,3 p. 100 of the preoperative values. Radiological evaluation showed good correction except one case of overcorrection of the palmar tilt (- 10 degrees) and one case of undercorrection of the radial inclination (+ 7 degrees). The distal radio-ulnar index was measured at the mean of 0mm postoperatively compared to + 7 mm pre-operatively.

Discussion The functional consequences of malunions of the distal radius have been stressed by others for more than sixty years. Since, many authors have contributed to refine and improve their surgical correction, Several displacements should be taken into account for the preoperative planning. They are sagittal tilt, frontal horizontalisation, shortening, sagittal and frontal translation, and axial rotation. Many types of **osteotomies** could be done; closing wedge, opening wedge or reorientation. In some cases, an operative procedure of the distal radio-ulnar joint should be done at the same time. We chose an opening-wedge **osteotomy** and the use of a temporary external fixator to ensure progressive distraction and good adjustment in the correction of angular deformities. In the dorsal tilt group we were satisfied in using on 7 patients a trapezoidal cortico-cancellous bone graft harvested on the radius.

Conclusion The authors would like to stress two points: - The technical interest of using a temporary external fixator to adjust the angular correction of the distal radius, - The importance of an adequate treatment of distal **radius fractures** in emergency situation, considering the functional and cosmetic alterations due to malunions and their need for surgical corrections in main instances.

40/7/25 (Item 2 from file: 34) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
SciSearch(R) Cited Ref Sci

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06329299 **Genuine Article#:** YJ038 **Number of References:** 33

Kirschner wire osteosynthesis for dorsal instability in fractures of the distal radius (Colles)

Author: Fritz T (REPRINT) ; Klavara R; Krieglstein C; Mattern R; Kallieris D; Friedl W

Corporate Source: UNIV HEIDELBERG, CHIRURG KLIN, SEKT UNFALL & WIEDERHERSTELLUNGSSCHIRURG, KIRSCHNERSTR 1, INF /D-69120 HEIDELBERG//GERMANY/ (REPRINT); UNIV HEIDELBERG, INST RECHTS MED/D-69120 HEIDELBERG//GERMANY/

Journal: CHIRURG , 1997 , V 68 , N11 (NOV) , P 1137-1145

ISSN: 0009-4722 **Publication date:** 19971100

Publisher: SPRINGER VERLAG , 175 FIFTH AVE, NEW YORK, NY 10010

Language: German **Document Type:** ARTICLE

Abstract: The following experimental study was conducted to develop biocompatible methods of osteosynthesis in fractures of the distal **radius** and to evaluate their stability. A model of dorsal wedge **osteotomy** in the distal radial metaphysis was used to develop the surgical technique and to test the stability of the alternative methods of osteosynthesis. The concept for this model was based on commercially available materials which were either biodegradable or osteoconductive. Four different forms of biocompatible osteosynthesis were compared to combined **Kirschner** wire osteosynthesis (KWO), our preferred method of treatment of unstable Colles fracture. Biocompatible osteosynthesis was achieved with an invasivity and stability comparable to that of KWO. In conclusion, injection osteosynthesis exceeded the other biocompatible methods of osteosynthesis in all respects. Regarding the recent developments in injectable materials for osteosynthesis it offers the best perspective for clinical application.

43/7/2 (Item 2 from file: 73) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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13295441 EMBASE No: 2005347477

The oblique proximal phalangeal osteotomy in the correction of hallux valgus

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Author Email: Michael.Cohen@med.va.gov

Journal of Foot and Ankle Surgery (J. FOOT ANKLE SURG.) (United States) 2003 , 42/5 (282-289)

CODEN: JFSUE **ISSN:** 1067-2516

Document Type: Journal ; Review

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 14

An oblique proximal phalangeal **osteotomy** is **introduced** as an alternative to the Akin procedure for the treatment of hallux valgus. It consists of a single oblique **osteotomy** directed from proximal-dorsal to plantar-distal. A retrospective review of 32 patients who underwent 36 oblique proximal **osteotomies** is presented. The mean follow-up was 11 months (range, 3 to 21 months). Pre- and postoperative radiographic measurements of the distal articular set angles showed an average correction angle of 12degrees (range, 7degrees to 22degrees; SD = 2.99). Mean range of first metatarsophalangeal joint motion was 82% of the preoperative value when combined with distal metatarsal **osteotomy**, and 87% of the preoperative value without a distal metatarsal **osteotomy**. Time to clinical and radiographic healing averaged 5 weeks (range, 4 to 8 weeks). The average amount of phalangeal shortening was 1 mm (range, 0 to 2 mm). There were no delayed or nonunions. Subjective assessment conducted by retrospective review of 19 patients at 6 months postoperatively showed that 17 were completely satisfied (90%), 1 was satisfied (5%), and 1 fairly satisfied (5%). Nineteen would have the surgery again (1 with reservations). Eighteen were very satisfied with appearance and 1 was improved. Fourteen returned to shoe gear at weeks 6 to 8, and 5 returned at weeks 8 to 12. Eighteen were satisfied with pain relief and 1 was improved. The study indicates that the oblique proximal phalangeal **osteotomy** is an effective, reliable, and technically simple procedure for correction of deformities of the proximal phalanx. The advantages include minimal shortening, ease of adjustability, and a construct conducive to rigid fixation. Copyright (c) 2003 by the American College of Foot and Ankle Surgeons.

43/7/4 (Item 4 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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06588017 EMBASE No: 1996252659

Alternatives to the closing base wedge osteotomy

Martin D.E.; Blitch E.L.

9313 Medical Plaza Drive, North Charleston, SC 29406 United States

Clinics in Podiatric Medicine and Surgery (CLIN. PODIATR. MED. SURG.) (United States) 1996 , 13/3 (515-531)

CODEN: CPSUE **ISSN:** 0891-8422

Document Type: Journal ; Review

Language: ENGLISH **Summary Language:** ENGLISH

The closing base wedge **osteotomy** remains a viable option in treating hallux valgus deformities with high intermetatarsal angles; however, the procedure can be technically difficult to perform and has been associated with a fair number of potential complications. As a result, a variety of **osteotomies** have been **introduced** and modified over the years that may serve as alternatives. Though all procedures possess complications, several of these alternatives do offer some significant advantages over the closing base wedge **osteotomy**.

?

Set	Items	Description
S1	45	S AU=(ORBAY J? OR ORBAY, J?)
S2	32	S S1 AND (OSTEOTOM? OR (K OR KAY) (2N) (WIRE? ? OR PIN OR PINS) OR KIRSCHNER? OR (BONE? ? OR END OR ENDS) (2N) PLATE? ? OR BONEPLATE? OR ENDPLATE?)
S3	6	S S1 AND OSTEOTOM? AND ((K OR KAY) (2N) (WIRE? ? OR PIN OR PINS) OR KWIRE? OR KIRSCHNER? OR (BONE? ? OR END OR ENDS) (2N) PLATE? ? OR BONEPLATE? OR ENDPLATE?)
S4	26	S, S2 NOT S3

; show files

[File 350] **Derwent WPIX** 1963-2006/UD=200707

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**File 350: DWPI has been enhanced to extend content and functionality of the database. For more info, visit <http://www.dialog.com/dwpi/>.*

[File 347] **JAPIO** Dec 1976-2006/Sep(Updated 061230)

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3/5/1 (Item 1 from file: 350) [Links](#)

Derwent WPIX

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0016294606 *Drawing available*

WPI Acc no: 2007-010772/200702

XRAM Acc no: C2007-004150

XRPX Acc No: N2007-008106

Humeral fracture fixation system for e.g. treatment of osteotomies, has cortical screws for coupling shaft portion of bone plate to humeral shaft, and pegs with threaded portion fit into humeral head

Patent Assignee: DEPUY PROD INC (DEPU-N); NUNEZ J A (NUNE-I); ORBAY J L (ORBA-I)

Inventor: NUNEZ J A; **ORBAY J L**

Patent Family (3 patents, 38 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1723920	A2	20061122	EP 2006252607	A	20060518	200702	B
JP 2006326303	A	20061207	JP 2006140615	A	20060519	200702	E
US 20060264947	A1	20061123	US 2005134247	A	20050520	200702	E

Priority Applications (no., kind, date): US 2005134247 A 20050520

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 1723920	A2	EN	10	5	
Regional Designated States,Original	AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU				
JP 2006326303	A	JA	15		

Alerting Abstract EP A2

NOVELTY - The system (10) includes a **bone plate** (14) having a head portion (16) and a shaft portion (18). Pegs (20, 22), each comprising a smooth shaft portion and a threaded shaft portion, are inserted into a humeral head (24). The length of the threaded portion is same for each peg and the length of the smooth portion is different for pegs of different lengths. Several cortical screws (26a, 26b) fitted into a screw hole (90) couple the shaft portion of the plate to a humeral shaft (28). The ratio between major and minor diameters of the threaded portion is equal to or greater than 1.5.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

1. a kit for a fracture fixation system
2. a kit of pegs for bone support
3. a peg for bone support.

USE - Used for treating fracture of a proximal humerus, of a femoral head, in the treatment of **osteotomies** and non-unions of the proximal humerus and bones having a convex shaped surface.

ADVANTAGE - The cortical screws facilitate implantation of the humeral fracture fixation system, thus preventing orthopedic damage and post-traumatic arthritis. The ratio of the major to minor diameters of the threaded portion of the peg is set relatively large to provide support to the bone, thus enhancing the peg fixation and preventing perforation of the bone cortex.

DESCRIPTION OF DRAWINGS - The drawing shows an anterior-posterior view of a humeral fixation system.

10 Fracture fixation system

14 **Bone plate**

16 Head portion

18 Shaft portion

20, 22 Pegs

24 Humeral head

26a, 26b Cortical screws

28 Humeral shaft

36 Suture holes

90 Screw hole

Title Terms /Index Terms/Additional Words: HUMERUS; FRACTURE; FIX; SYSTEM; TREAT; CORTICAL; SCREW; COUPLE; SHAFT; PORTION; BONE; PLATE; PEG; THREAD; FIT; HEAD

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/58	A	I	F	B	20060101
A61B-0017/80	A	I	F	B	20060101
A61B-0017/86	A	I	L	B	20060101
A61F-0002/30	A	I	F	B	20060101
A61B-0017/68	C	I	F	B	20060101
A61B-0017/68	C	I	L	B	20060101

US Classification, Issued: 606069000

File Segment: CPI; EngPI

DWPI Class: A25; A96; P31

Manual Codes (CPI/A-N): A12-V03D

3/5/2 (Item 2 from file: 350) [Links](#)

Derwent WPIX

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0014884631 *Drawing available*

WPI Acc no: 2005-232371/200524

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-191399

Volar fixation plate used with fixation pegs and K- wires in fixation system for distal radius fractures, has alignment holes set into predefined axial orientations such that K- wires approximate three-dimensional surface

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050065524	A1	20050324	US 2003401089	A	20030327	200524	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
			US 2004985598	A	20041110		

Priority Applications (no., kind, date): US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2004985598 A 20041110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050065524	A1	EN	16	16	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
					C-I-P of application	US 2003689797

Alerting Abstract US A1

NOVELTY - A rigid volar fixation plate (102) includes alignment holes for receiving **K-wires**. The alignment holes are set into predefined axial orientations such that the **K-wires** approximate a three-dimensional surface defined by fixation pegs (106,108) inserted into peg holes, when the **K-wires** are inserted into the alignment holes.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a fracture fixation system.

USE - Used with fixation pegs and **K-wires** in fixation system for distal radius fractures.

ADVANTAGE - Aligns and stabilizes multiple bone fragments in fracture to allow proper healing. Can effectively provide support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of volar fixation plate.

100 Fixation system

102 Volar fixation plate

106,108 Pegs

116 Main body

118 Head section

Title Terms /Index Terms/Additional Words: FIX; PLATE; PEG; WIRE ; SYSTEM; DISTAL; RADIUS;

FRACTURE; ALIGN; HOLE; SET; PREDEFINED; AXIS; ORIENT; APPROXIMATE; THREE; DIMENSION;
SURFACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;
DWPI Class: P31

3/5/3 (Item 3 from file: 350) [Links](#)

Derwent WPIX

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0014884630 *Drawing available*

WPI Acc no: 2005-232370/200524

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442;
2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795;
2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232371; 2005-232372; 2005-497291; 2005-563579;
2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-191398

Fixation system for distal radius fractures, has K- wire which can be set in non-fixed angle relationship within predefined range of angles in second direction transverse to first direction

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050065523	A1	20050324	US 2003401089	A	20030327	200524	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
			US 2004985597	A	20041110		

Priority Applications (no., kind, date): US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2004985597 A 20041110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20050065523	A1	EN	16	16	C-I-P of application US 2003401089

				C-I-P of application	US 2003664371
				C-I-P of application	US 2003689797

Alerting Abstract US A1

NOVELTY - A **K-wire** can be set in a fixed angle relationship in an anterior-posterior first direction when the **K-wire** is received through the alignment hole of a rigid volar fixation plate (102). The **K-wire** can be set in a non-fixed angle relationship within a predefined range of angles in a second direction transverse to the first direction.

DESCRIPTION - A rigid volar fixation plate (102) includes an alignment hole whose opposite ends individually have a circular opening and a laterally oblong opening.

USE - For aligning and stabilizing multiple bone fragments in a dorsally displaced distal radius fracture.

ADVANTAGE - Aligns and stabilizes multiple bone fragments in fracture to allow proper healing. Can effectively provide support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of volar fixation plate.

100 Fixation system

102 Volar fixation plate

108 Pegs

116 Main body

118 Head section

Title Terms /Index Terms/Additional Words: FIX; SYSTEM; DISTAL; RADIUS; FRACTURE; WIRE; CAN; SET; NON; ANGLE; RELATED; PREDEFINED; RANGE; SECOND; DIRECTION; TRANSVERSE; FIRST

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31

3/5/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0014884629 *Drawing available*

WPI Acc no: 2005-232369/200524

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579;

2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-191397

Volar fixation plate used with fixation pegs of fixation system for distal radius fractures, defines first set of linearly arranged holes proximate to buttress, and second set of linearly arranged holes partially defined in buttress

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050065522	A1	20050324	US 2003401089	A	20030327	200524	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
			US 2004985596	A	20041110		

Priority Applications (no., kind, date): US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2004985596 A 20041110

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050065522	A1	EN	16	16	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
					C-I-P of application	US 2003689797

Alerting Abstract US A1

NOVELTY - The volar fixation plate (102) accommodates the anatomy of the volar side of a distal radius bone. The head section (118) of the plate includes a buttress which is distally tapered in thickness. The plate defines a first set of linearly arranged peg holes proximate to the buttress, and a second set of linearly arranged peg holes partially defined in the buttress.

DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a fracture fixation plate implanting method.

USE - Used with fixation pegs of fixation system for distal radius fractures.

ADVANTAGE - Aligns and stabilizes multiple bone fragments in fracture to allow proper healing. Can effectively provide support for articular and subchondral surfaces.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of volar fixation plate.

100 Fixation system

102 Volar fixation plate

108 Pegs

116 Main body

118 Head section

Title Terms /Index Terms/Additional Words: FIX; PLATE; PEG; SYSTEM; DISTAL; RADIUS; FRACTURE; DEFINE; FIRST; SET; LINEAR; ARRANGE; HOLE ; PROXIMATE; BUTTRESS; SECOND

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/58			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31

3/5/5 (Item 5 from file: 350) [Links](#)

Derwent WPIX

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0014507989 *Drawing available*

WPI Acc no: 2004-689909/200467

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2004-546634

Stabilizing method for bone fracture, involves removing K-wire after permanently fixing plate over fracture with multiple pegs formed with threads along one or more portions

Patent Assignee: HAND INNOVATIONS INC (HAND-N); HAND INNOVATIONS LLC (HAND-N)

Inventor: **ORBAY J L; ORBAY J**

Patent Family (4 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040193165	A1	20040930	US 2003401089	A	20030327	200467	B
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
WO 2005034780	A1	20050421	WO 2004US8752	A	20040322	200527	E
EP 1677690	A1	20060712	EP 2004817171	A	20040322	200648	E
			WO 2004US8752	A	20040322		
AU 2004279290	A1	20050421	AU 2004279290	A	20040322	200674	E

Priority Applications (no., kind, date): US 2003401089 A 20030327; US 2003664371 A 20030917; US 2003689797 A 20031021

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes

US 20040193165	A1	EN	14	14	C-I-P of application	US 2003401089
					C-I-P of application	US 2003664371
WO 2005034780	A1	EN				
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
EP 1677690	A1	EN			PCT Application	WO 2004US8752
					Based on OPI patent	WO 2005034780
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR					
AU 2004279290	A1	EN			Based on OPI patent	WO 2005034780

Alerting Abstract US A1

NOVELTY - A T-shaped plate (102) is placed over a reduced fracture. The reduced fracture is temporarily stabilized, by fixing plate over the fracture with **K-wires**. The **K-wire** is removed after permanently fixing the plate over fracture with multiple pegs (106,108) formed with threads along one or more portions.

USE - For stabilizing bone fracture.

ADVANTAGE - Enables aligning and stabilizing multiple bone fragments in fracture to permit proper healing. Enables entry and retention of bone pegs within the peg holes due to bone pegs and peg holes within the plate. Reduces cross threading by fifty percent due to combination of double lead thread holes and a single helical thread on the peg head. Enables stabilizing and securing head of **plate** on the **bone** even when pegs do not have threaded shafts. Prevents damage to bone caused by drilling process since **K- wire** is of relatively small diameter.

DESCRIPTION OF DRAWINGS - The figure shows the radial side elevation view of a right hand volar plate coupled with pegs.

102 Plate

106,108 Pegs

116 Body portion

150 Body alignment hole

Title Terms /Index Terms/Additional Words: STABILISED; METHOD; BONE; FRACTURE; REMOVE; WIRE; AFTER; PERMANENT; FIX; PLATE; MULTIPLE; PEG; FORMING; THREAD; ONE; MORE; PORTION

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0017/80	A	I		R	20060101
A61B-0017/86	A	N		R	20060101
A61B-0017/56	A	I	F	B	20060101
A61B-0017/58	A	I	L	B	20060101

A61F-0002/30	A	I	L	B	20060101
A61B-0017/68	C	I		R	20060101

US Classification, Issued: 606069000

File Segment: EngPI; ;

DWPI Class: P31; P32

3/5/6 (Item 6 from file: 350) [Links](#)

Derwent WPIX

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0014507988 *Drawing available*

WPI Acc no: 2004-689908/200467

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2004-546633

Fixation plate for treating distal radius fractures has fixation plate with non-threaded alignment hole which has a relatively smaller diameter sized to closely receive a K-wire

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040193164	A1	20040930	US 2003401089	A	20030327	200467	B
			US 2003664371	A	20030917		

Priority Applications (no., kind, date): US 2003401089 A 20030327; US 2003664371 A 20030917

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040193164	A1	EN	13	12	C-I-P of application	US 2003401089

Alerting Abstract US A1

NOVELTY - The fracture fixation system (100) has a fixation plate (102) with two sets of threaded peg holes that individually receive fixation pegs (106,108). One non-threaded alignment hole has a relatively smaller diameter sized to closely receive a **K-wire**. Each alignment hole is located between peg holes.

DESCRIPTION - An INDEPENDENT CLAIM is also included for treating method for distal radius fracture.

USE - For treating distal radius fractures.

ADVANTAGE - Aligns and stabilizes multiple bone fragments at a desired condition in a fracture to permit proper

healing. Provides support for articular and subchondral surfaces.
DESCRIPTION OF DRAWINGS - The figure shows a radial side elevation of a right hand volar plate.
100 Fracture fixation system
102 Fixation plate
106,108 Pegs
118 Head

Title Terms /Index Terms/Additional Words: FIX; PLATE; TREAT; DISTAL; RADIUS; FRACTURE; NON;
THREAD; ALIGN; HOLE; RELATIVELY; SMALLER; DIAMETER; SIZE; CLOSELY; RECEIVE; WIRE

Class Codes

International Patent Classification					
IPC	Class Level	Scope	Position	Status	Version Date
A61B-017/56			Main		"Version 7"

US Classification, Issued: 606069000

File Segment: EngPI; ;
DWPI Class: P31

?

4/3/1 (Item 1 from file: 350) [Links](#)

Derwent WPIX

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0016294605 *Drawing available*

WPI Acc no: 2007-010771/200702

XRAM Acc no: C2007-004149

XRPX Acc No: N2007-008105

Step drill bit for use in conjunction with bone fastener, has steeped working end with cutting flutes to remove bone and protruding blunt tip with diameter less than minor diameter of threaded shaft portion of threaded shaft peg

Patent Assignee: CAVALLAZZI C (CAVA-I); DEPUY PROD INC (DEPU-N); GRAHAM R (GRAH-I); ORBAY J L (ORBA-I)

Inventor: CAVALLAZZI C; GRAHAM R; **ORBAY J L**

Patent Family (3 patents, 38 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1723917	A1	20061122	EP 2006252603	A	20060518	200702	B
JP 2006326304	A	20061207	JP 2006140629	A	20060519	200702	E
US 20060264956	A1	20061123	US 2005134248	A	20050520	200702	E

Priority Applications (no., kind, date): US 2005134248 A 20050520

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 1723917	A1	EN	11	5	
Regional Designated States,Original	AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR YU				
JP 2006326304	A	JA	14		

4/3/2 (Item 2 from file: 350) [Links](#)

Derwent WPIX

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0016157426 *Drawing available*

WPI Acc no: 2006-689055/200671

Related WPI Acc No: 2006-649166

XRPX Acc No: N2006-545609

Fracture fixation plate system used on long bone having metaphysis and diaphysis, has: end plate with head

portion for metaphysis having fixation holes to receive fixation elements that extend into bone, and fragment plate with screw holes

Patent Assignee: CASTANEDA J E (CAST-I); FRANCESE J L (FRAN-I); MEBARAK E (MEBA-I); ORBAY J L (ORBA-I); SIXTO R (SIXT-I)

Inventor: CASTANEDA J E; FRANCESE J L; MEBARAK E; **ORBAY J L**; SIXTO R

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060235404	A1	20061019	US 200582401	A	20050317	200671	B
			US 2006378703	A	20060317		

Priority Applications (no., kind, date): US 200582401 A 20050317; US 2006378703 A 20060317

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes		
US 20060235404	A1	EN	19	20	C-I-P of application	US 200582401	

4/3/3 (Item 3 from file: 350) [Links](#)

Derwent WPIX

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0016117536 *Drawing available*

WPI Acc no: 2006-649166/200667

Related WPI Acc No: 2006-689055

XRPX Acc No: N2006-523484

Fracture fixation plate system for bone, has screw insertion holes for bones formed in pair of long plates which are connected together

Patent Assignee: DEPUY PROD INC (DEPU-N); CASTANEDA J E (CAST-I); MEBARAK E (MEBA-I); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; FRANCESE J L; MEBARAK E; **ORBAY J L**; SIXTO R

Patent Family (2 patents, 111 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2006102081	A1	20060928	WO 2006US9717	A	20060317	200667	B
US 20060229619	A1	20061012	US 200582401	A	20050317	200668	E

Priority Applications (no., kind, date): US 200582401 A 20050317

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes

WO 2006102081	A1	EN	36	20		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					

4/3/4 (Item 4 from file: 350) [Links](#)

Derwent WPIX

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0015991045 *Drawing available*

WPI Acc no: 2006-522714/200653

Related WPI Acc No: 2003-018100; 2003-440580; 2003-440581; 2004-553077; 2005-232367; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-454198; 2006-492825

XRPX Acc No: N2006-418925

Bone implant used for e.g. orthopaedic surgery has plate-like head portion bent at an angle relative to endosteal surface, with locking holes configured to lock bone support elements relative to head portion

Patent Assignee: BOURDA M (BOUR-I); CASTANEDA J E (CAST-I); CAVALLAZZI C (CAVA-I); DEPUY PROD INC (DEPU-N); GRAHAM R (GRAH-I); ORBAY J L (ORBA-I); FELICIANO E (FELI-I)

Inventor: BOURDA M; CASTANEDA J E; CAVALLAZZI C; GRAHAM R; **ORBAY J L**; FELICIANO E

Patent Family (4 patents, 111 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2006081483	A1	20060803	WO 2006US3065	A	20060126	200653	B
US 20060189987	A1	20060824	US 2002159611	A	20020530	200656	E
			US 2002315787	A	20021210		
			WO 2003US14775	A	20030509		
			US 200540724	A	20050121		
			US 2005648989	P	20050128		
			US 2005515699	A	20051125		
			US 2006341120	A	20060126		
US 20060189996	A1	20060824	US 2005648989	P	20050128	200656	E
			US 2006341248	A	20060126		
US 20060200157	A1	20060907	US 2005648989	P	20050128	200659	E
			US 2006341248	A	20060126		

		US 2006277160	A	20060322		
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Priority Applications (no., kind, date): US 2002159611 A 20020530; US 2002315787 A 20021210; WO 2003US14775 A 20030509; US 200540724 A 20050121; US 2005648989 P 20050128; US 2005515699 A 20051125; US 2006341120 A 20060126; US 2006341248 A 20060126; US 2006277160 A 20060322

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2006081483	A1	EN	43	28		
National Designated States, Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States, Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
US 20060189987	A1	EN			C-I-P of application	US 2002159611
					C-I-P of application	US 2002315787
					C-I-P of application	WO 2003US14775
					C-I-P of application	US 200540724
					Related to Provisional	US 2005648989
					C-I-P of application	US 2005515699
					C-I-P of patent	US 6706046
					C-I-P of patent	US 6730090
US 20060189996	A1	EN			Related to Provisional	US 2005648989
US 20060200157	A1	EN			Related to Provisional	US 2005648989
					C-I-P of application	US 2006341248

4/3/5 (Item 5 from file: 350) [Links](#)

Derwent WPIX

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0015961159 *Drawing available*

WPI Acc no: 2006-492827/200650

Related WPI Acc No: 2006-446308

XRPX Acc No: N2006-397821

Fracture fixation plate shaping kit for surgical devices, has handle of specific size and shape for engaging

with tubular elements removably coupled in threaded holes in bone plate

Patent Assignee: CASTANEDA J E (CAST-I); KORTENBACH J A (KORT-I); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; KORTENBACH J A; **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060161158	A1	20060720	US 200411917	A	20041214	200650	B
			US 2006384841	A	20060320		

Priority Applications (no., kind, date): US 200411917 A 20041214; US 2006384841 A 20060320

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20060161158	A1	EN	16	18	C-I-P of application	US 200411917

4/3/6 (Item 6 from file: 350) [Links](#)

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0015961157 *Drawing available*

WPI Acc no: 2006-492825/200650

Related WPI Acc No: 2003-018100; 2003-440580; 2003-440581; 2004-553077; 2005-232367; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-454198; 2006-522714

XRPX Acc No: N2006-397819

Fracture fixation device has supra-metaphyseal plate that includes fixed angle hole between neck and front end, and space between lip and nail

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060161156	A1	20060720	WO 2003US14775	A	20030509	200650	B
			US 2004546127	P	20040220		
			US 2005643432	P	20050107		
			US 200540732	A	20050121		
			US 2005515699	A	20051125		
			US 2006384842	A	20060320		

Priority Applications (no., kind, date): US 2005515699 A 20051125; US 200540732 A 20050121; US 2005643432

P 20050107; US 2004546127 P 20040220; WO 2003US14775 A 20030509; US 2006384842 A 20060320

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20060161156	A1	EN	11	5	C-I-P of application	WO 2003US14775
					Related to Provisional	US 2004546127
					Related to Provisional	US 2005643432
					C-I-P of application	US 200540732
					C-I-P of application	US 2005515699

4/3/7 (Item 7 from file: 350) [Links](#)

Derwent WPIX

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0015948494 *Drawing available*

WPI Acc no: 2006-480161/200649

XRPX Acc No: N2006-390515

Screw driver system for locking bone screws relative to bone plates, has first and second drivers, each having engagement material engaging second portion located at second end of each of first and second drivers

Patent Assignee: CASTANEDA J E (CAST-I); HAND INNOVATIONS LLC (HAND-N); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; **ORBAY J L**

Patent Family (2 patents, 111 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2006068775	A2	20060629	WO 2005US42837	A	20051128	200649	B
US 20060149264	A1	20060706	US 200417313	A	20041220	200649	E

Priority Applications (no., kind, date): US 200417313 A 20041220

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2006068775	A2	EN	19	13		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR					

States,Original	HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
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4/3/8 (Item 8 from file: 350) [Links](#)

Derwent WPIX

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0015922559 *Drawing available*

WPI Acc no: 2006-454198/200646

Related WPI Acc No: 2003-018100; 2003-440580; 2003-440581; 2004-553077; 2005-232367; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-492825; 2006-522714

XRPX Acc No: N2006-372011

Fracture fixation device for treating metaphyseal fractures, has supra-metaphyseal plate portion having upper surface with dimple for referencing implantation jig and numerous fixed angle holes, and intramedullary nail portion

Patent Assignee: CASTANEDA J E (CAST-I); MEBARAK E (MEBA-I); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; MEBARAK E; **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060149257	A1	20060706	US 2002159611	A	20020530	200646	B
			US 2002315787	A	20021210		
			WO 2003US14775	A	20030509		
			US 2005515699	A	20051125		
			US 2006342128	A	20060127		

Priority Applications (no., kind, date): US 2005515699 A 20051125; WO 2003US14775 A 20030509; US 2002315787 A 20021210; US 2002159611 A 20020530; US 2006342128 A 20060127

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20060149257	A1	EN	10	5	C-I-P of application	US 2002159611
					C-I-P of application	US 2002315787
					C-I-P of application	WO 2003US14775
					C-I-P of application	US 2005515699
					C-I-P of patent	US 6706046
					C-I-P of patent	US 6730090

4/3/9 (Item 9 from file: 350) [Links](#)

Derwent WPIX

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0015914667 *Drawing available*

WPI Acc no: 2006-446308/200645

Related WPI Acc No: 2006-492827

XRPX Acc No: N2006-365750

Bone plate system for treating fracture of wrist, has drill guide tips removably pre-assembled in each threaded hole and axis of guide tips aligned with axis of holes

Patent Assignee: CASTANEDA J E (CAST-I); DOYLE W F (DOYL-I); GRAHAM R F (GRAH-I); HAND INNOVATIONS LLC (HAND-N); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; DOYLE W F; GRAHAM R F; **ORBAY J L**

Patent Family (2 patents, 111 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2006065512	A1	20060622	WO 2005US42969	A	20051128	200645	B
US 20060149250	A1	20060706	US 200411917	A	20041214	200645	E

Priority Applications (no., kind, date): US 200411917 A 20041214

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
WO 2006065512	A1	EN	18	12	
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW				
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				

4/3/10 (Item 10 from file: 350) [Links](#)

Derwent WPIX

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0015600132 *Drawing available*

WPI Acc no: 2006-164301/200617

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433

XRAM Acc no: C2006-054820

XRPX Acc No: N2006-141848

Fracture fixation system for fixing bone fractures, i.e. Colle's fracture, has rigid plate with internally threaded holes, pegs with head and shaft received through threaded holes, and sets of screws engageable with internal threads

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060041260	A1	20060223	US 2000495854	A	20000201	200617	B
			US 2000739228	A	20001219		
			US 2002159612	A	20020530		
			US 2004897912	A	20040723		
			US 2005241563	A	20050930		

Priority Applications (no., kind, date): US 2004897912 A 20040723; US 2002159612 A 20020530; US 2000739228 A 20001219; US 2000495854 A 20000201; US 2005241563 A 20050930

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20060041260	A1	EN	14	22	C-I-P of application	US 2000495854
					C-I-P of application	US 2000739228
					Division of application	US 2002159612
					C-I-P of application	US 2004897912
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6399497
					Division of patent	US 6767351

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0015492307 *Drawing available*

WPI Acc no: 2006-056433/200606

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-164301; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2006-048725

Bone fixation system for use in bone fracture treatment, has set of locking screws with head and external structure for self-tapping into internal thread of locking screw hole at oblique angle relative to respective hole axis

Patent Assignee: CASTANEDA A (CAST-I); CASTANEDA J E (CAST-I); MEBARAK E (MEBA-I); ORBAY J L (ORBA-I)

Inventor: CASTANEDA A; CASTANEDA J E; MEBARAK E; **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20060009771	A1	20060112	US 2000495854	A	20000201	200606	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159611	A	20020530		
			US 2002315787	A	20021210		
			US 2003401089	A	20030327		
			US 2003664371	A	20030917		
			US 2003689797	A	20031021		
			US 2004762695	A	20040122		
			US 2005230021	A	20050919		

Priority Applications (no., kind, date): US 2004762695 A 20040122; US 2003689797 A 20031021; US 2003664371 A 20030917; US 2003401089 A 20030327; US 2002315787 A 20021210; US 2002159611 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2005230021 A 20050919

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20060009771	A1	EN	19	11	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of application	US 2002159611
					C-I-P of application	US 2002315787
					C-I-P of application	US 2003401089

				C-I-P of application	US 2003664371
				C-I-P of application	US 2003689797
				C-I-P of application	US 2004762695
				C-I-P of patent	US 6358250
				C-I-P of patent	US 6364882
				C-I-P of patent	US 6440135
				C-I-P of patent	US 6706046
				C-I-P of patent	US 6730090
				C-I-P of patent	US 6866665

4/3/12 (Item 12 from file: 350) [Links](#)

Derwent WPIX

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0015387879 *Drawing available*

WPI Acc no: 2005-732466/200575

XRAM Acc no: C2005-223371

XRPX Acc No: N2005-602924

Cap for covering end of metal orthopedic nail, includes lead-in tubular portion, engagement tubular portion, and closed end, and manufactured from plastic radiopaque material

Patent Assignee: CASTANEDA J (CAST-I); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J; **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050216006	A1	20050929	US 2004806540	A	20040323	200575	B

Priority Applications (no., kind, date): US 2004806540 A 20040323

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20050216006	A1	EN	6	4	

4/3/13 (Item 13 from file: 350) [Links](#)

Derwent WPIX

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0015380915 *Drawing available*

WPI Acc no: 2005-725167/200574

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2006-038289; 2006-056433; 2006-164301; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2005-596509

Volar fixation plate for Colles fracture, has head portion defining three threaded holes, where lateral threaded holes are situated relative to adjacent threaded holes that define axes of which two axes are relative to each other

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050245931	A1	20051103	US 2000495854	A	20000201	200574	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159611	A	20020530		
			US 2002315787	A	20021210		
			US 2004762695	A	20040122		
			US 2005181354	A	20050714		

Priority Applications (no., kind, date): US 2004762695 A 20040122; US 2002315787 A 20021210; US 2002159611 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2005181354 A 20050714

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050245931	A1	EN	12	24	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of application	US 2002159611
					C-I-P of application	US 2002315787
					Continuation of application	US 2004762695
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					C-I-P of patent	US 6706046
					C-I-P of patent	US 6730090

4/3/14 (Item 14 from file: 350) [Links](#)

Derwent WPIX

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0015213551 *Drawing available*

WPI Acc no: 2005-563579/200557

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2005-462109

Bone plate system for stabilizing fractured bones has set screw driven rotationally and axially in set screw hole at 180 degrees rotation to direct lateral compressive force to head portion of bone screw

Patent Assignee: CASTANEDA J E (CAST-I); CAVALLAZZI C (CAVA-I); GRAHAM R (GRAH-I); HAND INNOVATIONS LLC (HAND-N); ORBAY J L (ORBA-I)

Inventor: CASTANEDA J E; CAVALLAZZI C; GRAHAM R; **ORBAY J L**

Patent Family (2 patents, 109 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050187551	A1	20050825	US 2002307796	A	20021202	200557	B
			US 2004586131	P	20040707		
			US 200540779	A	20050121		
WO 2006014436	A1	20060209	WO 2005US23855	A	20050705	200612	E

Priority Applications (no., kind, date): US 2004586131 P 20040707; US 2002307796 A 20021202; US 200540779 A 20050121

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050187551	A1	EN	21	15	C-I-P of application	US 2002307796
					Related to Provisional	US 2004586131
					C-I-P of patent	US 6893444
WO 2006014436	A1	EN				
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE					

	SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

4/3/15 (Item 15 from file: 350) [Links](#)

Derwent WPIX

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0015192759 *Drawing available*

WPI Acc no: 2005-542352/200555

Related WPI Acc No: 2003-018100; 2003-440580; 2003-440581; 2004-553077; 2005-232367; 2005-232372; 2005-497291; 2005-505962; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2005-444253

Fracture fixation system for fracture of head portion of long bone, has support elements extending from distal portion of post, oriented to provide support to subchondral bone

Patent Assignee: CASTANEDA J E (CAST-I); CAVALLAZZI C (CAVA-I); HAND INNOVATIONS LLC (HAND-N); ORBAY J L (ORBA-I); DEPUY PROD INC (DEPU-N)

Inventor: CASTANEDA J E; CAVALLAZZI C; **ORBAY J L**; CASTANEDA J; **ORBAY J**

Patent Family (5 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2005072284	A2	20050811	WO 2005US2074	A	20050121	200555	B
US 20050182405	A1	20050818	US 2004538589	P	20040123	200555	E
			US 2004546127	P	20040220		
			US 2004598110	P	20040802		
			US 200540724	A	20050121		
US 20050182406	A1	20050818	US 2004538589	P	20040123	200555	E
			US 2004546127	P	20040220		
			US 2004598110	P	20040802		
			US 200540732	A	20050121		
EP 1713409	A2	20061025	EP 2005706032	A	20050121	200670	E
			WO 2005US2074	A	20050121		
AU 2005208810	A1	20050811	AU 2005208810	A	20050121	200707	E

Priority Applications (no., kind, date): US 2004538589 P 20040123; US 2004546127 P 20040220; US 2004598110 P 20040802; US 2005643432 P 20050107; US 200540724 A 20050121; US 200540732 A 20050121

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2005072284	A2	EN	43	31		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
US 20050182405	A1	EN			Related to Provisional	US 2004538589
					Related to Provisional	US 2004546127
					Related to Provisional	US 2004598110
US 20050182406	A1	EN			Related to Provisional	US 2004538589
					Related to Provisional	US 2004546127
					Related to Provisional	US 2004598110
EP 1713409	A2	EN			PCT Application	WO 2005US2074
					Based on OPI patent	WO 2005072284
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR					
AU 2005208810	A1	EN			Based on OPI patent	WO 2005072284

4/3/16 (Item 16 from file: 350) [Links](#)

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0015156382 *Drawing available*

WPI Acc no: 2005-505962/200551

Related WPI Acc No: 2003-018100; 2003-440580; 2003-440581; 2004-553077; 2005-232367; 2005-232372; 2005-497291; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2005-413024

Proximal humeral fracture fixation system for stabilizing fractures of convex articular bone surfaces, includes posts mechanically coupled in post holes of plate and rigid cross support pegs extended through distal portions of posts

Patent Assignee: CASTANEDA J E (CAST-I); CAVALLAZZI C (CAVA-I); HAND INNOVATIONS LLC (HAND-N); ORBAY J L (ORBA-I); DEPUY PROD INC (DEPU-N)

Inventor: CASTANEDA J E; CAVALLAZZI C; **ORBAY J L**; CASTANEDA J; **ORBAY J**

Patent Family (4 patents, 107 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050165395	A1	20050728	US 2004538589	P	20040123	200551	B
			US 2004546127	P	20040220		
			US 200540734	A	20050121		
WO 2005072285	A2	20050811	WO 2005US2075	A	20050121	200553	E
US 7001388	B2	20060221	US 200540734	A	20050121	200615	E
EP 1713410	A2	20061025	EP 2005706033	A	20050121	200670	E
			WO 2005US2075	A	20050121		

Priority Applications (no., kind, date): US 2004538589 P 20040123; US 2004546127 P 20040220; US 200540734 A 20050121

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050165395	A1	EN	12	8	Related to Provisional	US 2004538589
					Related to Provisional	US 2004546127
WO 2005072285	A2	EN				
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
EP 1713410	A2	EN			PCT Application	WO 2005US2075
					Based on OPI patent	WO 2005072285
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR					

4/3/17 (Item 17 from file: 350) [Links](#)

Derwent WPIX

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0015147717 *Drawing available*

WPI Acc no: 2005-497291/200550

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442;

2003-440580; 2003-440581; 2004-553077; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2005-405634

Volar fixation system for treating e.g. Colles' fracture, has guide with guide holes that define drill guides adapted to direct drill through threaded holes in alignment with respective axes of threaded holes

Patent Assignee: ORBAY J L (ORBA-I)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20050159747	A1	20050721	US 2000495854	A	20000201	200550	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159611	A	20020530		
			US 2002315787	A	20021210		
			US 2004762695	A	20040122		
			US 200577833	A	20050311		

Priority Applications (no., kind, date): US 2004762695 A 20040122; US 2002315787 A 20021210; US 2002159611 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 200577833 A 20050311

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20050159747	A1	EN	11	24	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of application	US 2002159611
					C-I-P of application	US 2002315787
					Continuation of application	US 2004762695
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					C-I-P of patent	US 6706046
					C-I-P of patent	US 6730090

4/3/18 (Item 18 from file: 350) [Links](#)

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0014691209 *Drawing available*

WPI Acc no: 2005-038797/200504

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-033947

Colles fracture fixation system, has rigid plate with set of peg holes to individually receive fixation pegs in plate, and proximal rotational engagement unit to permit rotational force to be applied to set screws

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: LEONE J; ORBAY J L; STEFFEN D L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040260295	A1	20041223	US 2000495854	A	20000201	200504	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159612	A	20020530		
			US 2004897926	A	20040723		

Priority Applications (no., kind, date): US 2002159612 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2004897926 A 20040723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040260295	A1	EN	15	26	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					Division of application	US 2002159612
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					Division of patent	US 6767351

4/3/19 (Item 19 from file: 350) [Links](#)

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0014691208 *Drawing available*

WPI Acc no: 2005-038796/200504

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-033946

Fracture fixation system has bone screws for securing plate along non-fractured bone portion, and bone pegs which extend from plate and into bone fragments of fracture to provide supporting framework

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: LEONE J; ORBAY J L; STEFFEN D L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040260294	A1	20041223	US 2000495854	A	20000201	200504	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159612	A	20020530		
			US 2004897923	A	20040723		

Priority Applications (no., kind, date): US 2002159612 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2004897923 A 20040723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040260294	A1	EN	15	26	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					Division of application	US 2002159612
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					Division of patent	US 6767351

4/3/20 (Item 20 from file: 350) [Links](#)

Derwent WPIX

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0014691207 *Drawing available*

WPI Acc no: 2005-038795/200504

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-033945

Fracture fixation system for use in colles' fracture, has pegs that are inserted into peg holes and into drilled holes, and set screw that is inserted over each peg to lock peg in rigid T-shaped plate at chosen orientation

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: LEONE J; **ORBAY J L**; STEFFEN D L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040260293	A1	20041223	US 2000495854	A	20000201	200504	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159612	A	20020530		
			US 2004897922	A	20040723		

Priority Applications (no., kind, date): US 2002159612 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2004897922 A 20040723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040260293	A1	EN	15	26	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					Division of application	US 2002159612
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					Division of patent	US 6767351

4/3/21 (Item 21 from file: 350) [Links](#)

Derwent WPIX

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0014691206 *Drawing available*

WPI Acc no: 2005-038794/200504

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2005-033944

Fracture fixation system has bone pegs which extend from plate and into bone fragments of fracture and can be oriented at various angles relative to axis normal to lower surface of plate

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: LEONE J; **ORBAY J L**; STEFFEN D L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040260292	A1	20041223	US 2000495854	A	20000201	200504	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159612	A	20020530		
			US 2004897912	A	20040723		

Priority Applications (no., kind, date): US 2002159612 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2004897912 A 20040723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040260292	A1	EN	15	26	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					Division of application	US 2002159612
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					Division of patent	US 6767351

4/3/22 (Item 22 from file: 350) [Links](#)

Derwent WPIX

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0014364340 *Drawing available*

WPI Acc no: 2004-553077/200453

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2004-437626

Orthopedic fixation plate for bone surgery, has head portion with threaded holes adapted to receive bone pegs which are coupled therein

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: **ORBAY J L**

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040153073	A1	20040805	US 2000495854	A	20000201	200453	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159611	A	20020530		
			US 2002315787	A	20021210		
			US 2004762695	A	20040122		

Priority Applications (no., kind, date): US 2002315787 A 20021210; US 2002159611 A 20020530; US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2004762695 A 20040122

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20040153073	A1	EN	17	3	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of application	US 2002159611
					C-I-P of application	US 2002315787
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
					C-I-P of patent	US 6706046
					C-I-P of patent	US 6730090

Derwent WPIX

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0012941426 *Drawing available*

WPI Acc no: 2003-018101/200301

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018100; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2003-013974

Bone fracture fixing system has pegs provided into corresponding peg holes and individually positioned at angle relative to axis normal to lower surface of head of fixing plate

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: LEONE J; ORBAY J L; STEFFEN D L

Patent Family (4 patents, 98 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20020143338	A1	20021003	US 2000495854	A	20000201	200301	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159612	A	20020530		
WO 2003101321	A1	20031211	WO 2003US15873	A	20030519	200407	E
AU 2003239525	A1	20031219	AU 2003239525	A	20030519	200449	E
US 6767351	B2	20040727	US 2000495854	A	20000201	200449	E
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159612	A	20020530		

Priority Applications (no., kind, date): US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2002159612 A 20020530

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20020143338	A1	EN	16	26	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
WO 2003101321	A1	EN				
National Designated States, Original	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ					

	UA UG US UZ VN YU ZA ZM ZW					
Regional Designated States, Original	AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
AU 2003239525	A1	EN			Based on OPI patent	WO 2003101321
US 6767351	B2	EN			C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135

4/3/24 (Item 24 from file: 350) [Links](#)

Derwent WPIX

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0012941425 *Drawing available*

WPI Acc no: 2003-018100/200301

Related WPI Acc No: 2002-105310; 2002-303583; 2002-452931; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-505962; 2005-542352; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301; 2006-454198; 2006-492825; 2006-522714

XRPX Acc No: N2003-013973

Bone fracture fixation device has elongated nail with flexible section and rigid section having larger diameter than flexible section, such that flat plate with multiple peg holes is parallel to elongated nail

Patent Assignee: HAND INNOVATIONS INC (HAND-N); HAND INNOVATIONS LLC (HAND-N)

Inventor: CASTANEDA J; ORBAY J L

Patent Family (3 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20020143337	A1	20021003	US 2000495854	A	20000201	200301	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159611	A	20020530		
US 6730090	B2	20040504	US 2000495854	A	20000201	200430	E
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
			US 2002159611	A	20020530		
ZA 200409570	A	20060222	ZA 20049570	A	20041126	200619	E

Priority Applications (no., kind, date): US 2000735228 A 20001212; US 2000524058 A 20000313; US 2000495854 A 20000201; US 2002159611 A 20020530

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20020143337	A1	EN	10	14	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
US 6730090	B2	EN			C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of application	US 2000735228
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
					C-I-P of patent	US 6440135
ZA 200409570	A	EN	35			

4/3/25 (Item 25 from file: 350) [Links](#)

Derwent WPIX

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0012505052 *Drawing available*

WPI Acc no: 2002-452931/200248

Related WPI Acc No: 2002-105310; 2002-303583; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2002-357072

Volar fixation plate, has rigid t-shaped plate with distal head having a number of threaded peg holes adapted to individually receive fixation pegs

Patent Assignee: HAND INNOVATIONS INC (HAND-N)

Inventor: ORBAY J L

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 6364882	B1	20020402	US 2000495854	A	20000201	200248	B
			US 2000524058	A	20000313		

Priority Applications (no., kind, date): US 2000495854 A 20000201; US 2000524058 A 20000313

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 6364882	B1	EN	11	24	C-I-P of application	US 2000495854

4/3/26 (Item 26 from file: 350) [Links](#)

Derwent WPIX

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0011167760 *Drawing available*

WPI Acc no: 2002-105310/200214

Related WPI Acc No: 2002-303583; 2002-452931; 2003-018100; 2003-018101; 2003-219442; 2003-440580; 2003-440581; 2004-553077; 2004-668101; 2004-689907; 2004-689908; 2004-689909; 2005-038794; 2005-038795; 2005-038796; 2005-038797; 2005-232367; 2005-232369; 2005-232370; 2005-232371; 2005-232372; 2005-497291; 2005-563579; 2005-713292; 2005-725167; 2006-038289; 2006-056433; 2006-164301

XRPX Acc No: N2002-078300

Volar fixation system with articulating stabilization pegs, has bone screws which secure the T-shape plate along an non-fractured portion of the radial bone, and bone pegs extending from the plate and into bone fragments

Patent Assignee: HAND INNOVATIONS INC (HAND-N); HAND INNOVATIONS LLC (HAND-N)

Inventor: LEONE J; ORBAY J; ORBAY J L; ORBAY L

Patent Family (13 patents, 87 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20010011172	A1	20010802	US 2000495854	A	20000201	200214	B
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
AU 200133015	A	20010814	AU 200133015	A	20010129	200214	E
WO 2001056452	A2	20010809	WO 2001US2605	A	20010129	200214	E
US 6358250	B1	20020319	US 2000495854	A	20000201	200224	E
US 6440135	B2	20020827	US 2000495854	A	20000201	200259	E
			US 2000524058	A	20000313		
			US 2000735228	A	20001212		
EP 1251790	A2	20021030	EP 2001905098	A	20010129	200279	E
			WO 2001US2605	A	20010129		
KR 2002081282	A	20021026	KR 2002709742	A	20020729	200317	E
JP 2003529414	W	20031007	JP 2001556153	A	20010129	200370	E
			WO 2001US2605	A	20010129		
MX 2002007250	A1	20030901	WO 2001US2605	A	20010129	200465	E

			MX 20027250	A	20020725		
BR 200108011	A	20041207	BR 20018011	A	20010129	200507	E
			WO 2001US2605	A	20010129		
AU 2001233015	B2	20050811	AU 2001233015	A	20010129	200558	E
EP 1251790	B1	20060524	EP 2001905098	A	20010129	200635	E
			WO 2001US2605	A	20010129		
DE 60119890	E	20060629	DE 60119890	A	20010129	200643	E
			EP 2001905098	A	20010129		
			WO 2001US2605	A	20010129		

Priority Applications (no., kind, date): US 2000524058 A 20000313; US 2000495854 A 20000201; US 2000735228 A 20001212

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
US 20010011172	A1	EN	12	28	C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
AU 200133015	A	EN			Based on OPI patent	WO 2001056452
WO 2001056452	A2	EN				
National Designated States,Original	AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
Regional Designated States,Original	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
US 6440135	B2	EN			C-I-P of application	US 2000495854
					C-I-P of application	US 2000524058
					C-I-P of patent	US 6358250
					C-I-P of patent	US 6364882
EP 1251790	A2	EN			PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2003529414	W	JA	38		PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
MX 2002007250	A1	ES			PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
BR 200108011	A	PT			PCT Application	WO 2001US2605
					Based on OPI patent	WO 2001056452
AU 2001233015	B2	EN			Previously issued patent	AU 2001233015
					Based on OPI patent	WO 2001056452
EP 1251790	B1	EN			PCT Application	WO 2001US2605

				Based on OPI patent	WO 2001056452
Regional Designated States,Original	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR				
DE 60119890	E	DE		Application	EP 2001905098
				PCT Application	WO 2001US2605
				Based on OPI patent	EP 1251790
				Based on OPI patent	WO 2001056452

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Set	Items	Description
S1	69	S AU=(ORBAY J? OR ORBAY, J?)
S2	23	S S1 AND (OSTEOTOM? OR (K OR KAY) (2N) (WIRE? ? OR PIN OR PINS) OR KWIRE? OR KIRSCHNER? OR (BONE? ? OR END OR ENDS) (2N) PLATE? ? OR BONEPLATE? OR ENDPLATE?)
S3	16	RD (unique items)

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3/7/1 (Item 1 from file: 155) [Links](#)

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20779252 **PMID:** 16505728

Current concepts in volar fixed-angle fixation of unstable distal radius fractures.

Orbay Jorge L; Touhami Amel

Miami Hand Center, Miami, Florida 33176, USA. jlorbay@aol.com

Clinical orthopaedics and related research (United States) Apr 2006 , 445 p58-67 , ISSN: 0009-921X--Print

Journal Code: 0075674

Publishing Model Print

Document type: Journal Article; Review

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

We present new developments in the volar treatment of unstable distal radius fractures in adults. New perspectives on the anatomy of the wrist, the watershed line on the volar radius and the usefulness of the pronator fossa are presented and these help to avoid flexor and extensor tendon disturbance when using a volar approach. Other new insights on the bony anatomy of the distal end of the radius are discussed, which are important in improving the quality of fracture fixation, including the benefits of constructing a precise fixed-angle scaffold underneath the articular surface in order to stabilize it. A volar fixed-angle plate must support the dorsal, central and volar aspects of the subchondral bone in order to stabilize the most complex fractures. Awareness of the anatomy of blood supply to the distal radius: the dorsal retinaculum that feeds the distal fragments and the blood supply to the diaphysis through branches of the anterior interosseous artery is necessary to maximize healing potential and avoid complications. Volar fixed-angle plates need to withstand very high forces during rehabilitation, the magnitude of these forces are up to five times the loads applied on the hand. Level of Evidence: Level V (expert opinion). (84 Refs.)

Record Date Created: 20060410

Record Date Completed: 20060523

3/7/2 (Item 2 from file: 155) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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20779152 **PMID:** 16505726

Extraarticular hand fractures in adults: a review of new developments.

Freeland Alan E; **Orbay Jorge L**

Department of Orthopaedic Surgery and Rehabilitation, University of Mississippi Medical Center, Jackson, MS 39216, USA. afreeland@orthopedics.umsmed.edu

Clinical orthopaedics and related research (United States) Apr 2006 , 445 p133-45 , ISSN: 0009-921X--Print

Journal Code: 0075674

Publishing Model Print

Document type: Journal Article; Review

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

This report cites new developments in the treatment of extra-articular hand fractures in adults. Recent reports confirm that small amounts of metacarpal shortening or dorsal angulation cause minimal functional impairment. Unilateral excision of the lateral band and oblique fibers of the extensor apparatus of the metacarpophalangeal joint facilitates proximal phalangeal fracture exposure and may improve functional recovery. Results using open mini screw fixation of oblique extra-articular metacarpal and phalangeal fractures may be comparable to those of percutaneous **Kirschner** wire fixation. Bicortical self-tapping mini screw fixation of extra-articular oblique metacarpal and phalangeal fractures simplifies screw insertion and provides stability comparable to that of fractures fixed with lag screws. Percutaneous intramedullary wire fixation may afford suitable fixation for unstable extra-articular oblique as well as transverse metacarpal fractures. Locked intramedullary nails may offer similar advantages. Unicortical screw fixation of mini plates securing transverse extra-articular metacarpal fractures affords stability comparable to that of bicortical screw fixation while creating less bone damage. The dissection required for plate fixation and the small surface area of transverse fractures delay and occasionally impair bone healing. Primary bone grafting of diaphyseal defects in clean stable wounds may shorten and simplify treatment and decrease morbidity. As little as 1.7 mm of flexor tendon excursion during the first 4 weeks after reduction or repair may substantially diminish peritendinous adhesions at the fracture site. Synchronous wrist and digital exercises may also reduce peritendinous fracture adhesions. Early motion of adjacent joints in closed simple metacarpal fractures expedites recovery of motion and strength without adversely affecting fracture alignment and leads to earlier return to work. Level of Evidence: Level V (expert opinion). (102 Refs.)

Record Date Created: 20060411

Record Date Completed: 20060523

3/7/3 (Item 3 from file: 155) [Links](#)

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MEDLINE(R)

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19653865 **PMID:** 16175117

Fixed angle fixation of distal radius fractures through a minimally invasive approach.

Orbay Jorge L; Touhami Amel; Orbay Carolina

Miami Hand Center, Miami, Florida 33176, USA. jlorbay@aol.com

Techniques in hand & upper extremity surgery (United States) Sep 2005 , 9 (3) p142-8 , ISSN:

1089-3393--Print **Journal Code:** 9704676

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Treating unstable distal radius fractures in osteoporotic patients remains a challenge for the surgeon. Fixed angle plate fixation requires ample surgical dissection but has been shown to improve stability, allow early functional use of the hand and facilitate rehabilitation. We herein describe a treatment method that provides the benefits of fixed angle fixation while utilizing a minimally invasive approach. Stability is achieved by the use of a new implant that is placed through a small dorsal incision and minimizes extensor tendon disruption. This method finds application in the unstable extra-articular fracture of the high risk patient where minimal surgical morbidity is desirable and when reduction can be obtained without the need of extensive dissection. Clinical examples are fractures in the elderly

patient where confusion can follow prolonged anesthesia, fractures in the patient with a bleeding disorder where a small wound volume is desirable and fractures in the polytraumatized patient where surgical time must be kept to a minimum. This technique allows anatomic reduction and stable fixation to be achieved in a short operative time and with minimal surgical insult while providing the compromised patient with a rapid recovery.

Record Date Created: 20050921

Record Date Completed: 20051230

3/7/4 (Item 4 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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15552324 **PMID:** 16039446

Volar plate fixation of distal radius fractures.

Orbay Jorge

Miami Hand Center, 8905 Southwest 87 Avenue, Suite 100, Miami, FL 33176, USA. jlorbay@aol.com

Hand clinics (United States) Aug 2005 , 21 (3) p347-54 , ISSN: 0749-0712--Print **Journal Code:** 8510415

Publishing Model Print

Document type: Journal Article; Review

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Volar fixed angle fixation may be considered as the beginning of a new era in restoring wrist function to patients with dorsally displaced distal radius fractures even in the face of comminuted or osteopenic bone. A thorough understanding of the anatomy of the wrist is a prerequisite when volarly approaching dorsally displaced distal radius fractures. The demonstration of the device theoretical and practical advantages requires an appreciation of the basics of working length, principles of plate stability, and the effect of cantilever bending. Volar fixed angle fixation successfully improves wrist function and significantly prevents the complications of the dorsal approach previously intractable to treatment. The current advantages, indications, clinical results, and complications of this new technology are being reviewed. (29 Refs.)

Record Date Created: 20050725

Record Date Completed: 20050927

3/7/5 (Item 5 from file: 155) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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15055415 **PMID:** 15342751

Loss of fixation of the volar lunate facet fragment in fractures of the distal part of the radius.

Harness Neil G; Jupiter Jesse B; **Orbay Jorge L**; Raskin Keith B; Fernandez Diego L

Department of Orthopaedic Surgery, Massachusetts General Hospital, Boston 02114, USA.

Journal of bone and joint surgery. American volume (United States) Sep 2004 , 86-A (9) p1900-8 , ISSN:

0021-9355--Print **Journal Code:** 0014030

Publishing Model Print

Document type: Case Reports; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

BACKGROUND: The purpose of the present study is to report on a cohort of patients with a volar shearing fracture of the distal end of the radius in whom the unique anatomy of the distal cortical rim of the radius led to failure of support of a volar ulnar lunate facet fracture fragment. **METHODS:** Seven patients with a volar shearing fracture of the distal part of the radius who lost fixation of a volar lunate facet fragment with subsequent carpal displacement after open reduction and internal fixation were evaluated at an average of twenty-four months after surgery. One fracture was classified as B3.2 and six were classified as B3.3 according to the AO comprehensive classification system. All seven fractures initially were deemed to have an adequate reduction and internal fixation. Four patients required repeat open reduction and internal fixation, and one underwent a radiocarpal arthrodesis. At the time of the final follow-up, all patients were assessed with regard to their self-reported level of functioning and with use of Sarmiento's modification of the system of Gartland and Werley. **RESULTS:** At a mean of two years after the injury, six patients had returned to their previous level of function. The result was considered to be excellent for one patient, good for four, and fair for two. The average wrist extension was 48 degrees, or 75% of that of the uninjured extremity. The average wrist flexion was 37 degrees, or 64% of that of the uninjured extremity. The one patient who underwent radiocarpal arthrodesis had achievement of a solid union. The four patients who underwent repeat internal fixation had maintenance of reduction of the lunate facet fragment. The two patients who declined additional operative intervention had persistent dislocation of the carpus with the volar lunate facet fragment. **CONCLUSIONS:** The stability of comminuted fractures of the distal part of the radius with volar fragmentation is determined not only by the reduction of the major fragments but also by the reduction of the small volar lunate fragment. The unique anatomy of this region may prevent standard fixation devices for distal radial fractures from supporting the entire volar surface effectively. It is preferable to recognize the complexity of the injury prior to the initial surgical intervention and to plan accordingly.

Record Date Created: 20040902

Record Date Completed: 20041026

3/7/6 (Item 6 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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14731093 **PMID:** 14751111

Volar fixed-angle plate fixation for unstable distal radius fractures in the elderly patient.

Orbay Jorge L; Fernandez Diego L

Miami Hand Center, 8905 SW 87 Avenue, Suite 100, Miami, FL 33176, USA.

Journal of hand surgery (United States) Jan 2004 , 29 (1) p96-102 , ISSN: 0363-5023--Print **Journal Code:** 7609631

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

PURPOSE: Increased incidence of falls and osteoporosis combine to make distal radius fractures a major cause of morbidity for the elderly patient. This report presents our experience treating distal radius fractures in the elderly

population using a volar fixed-angle internal fixation plate. **METHODS:** We reviewed retrospectively all patients older than 75 years treated during a period of 4 years and 7 months at our centers for unstable distal radius fractures using a volar fixed-angle plate. Postoperative management included immediate finger motion, early functional use of the hand, and a wrist splint used for an average of 3 weeks. Standard radiographic fracture parameters were measured and final functional results were assessed by measuring finger motion, wrist motion, and grip strength. **RESULTS:** Of 26 patients that fit the inclusion criteria, we were able to evaluate 23 patients with 24 unstable distal radius fractures for an average of 63 weeks. Final volar tilt averaged 6 degrees and radial tilt 20 degrees, and radial shortening averaged less than 1 mm. The average final dorsiflexion was 58 degrees, volar flexion 55 degrees, pronation 80 degrees, and supination 76 degrees. Grip strength was 77% of the contralateral side. There were no plate failures or significant loss of reduction, although there was settling of the distal fragment in 3 patients (1-3 mm). **CONCLUSIONS:** The treatment of unstable distal radius fractures in the elderly patient with a volar fixed-angle plate provided stable internal fixation and allowed early function. This technique minimized morbidity in the elderly population by successfully handling osteopenic bone, allowed early return to function, provided good final results, and was associated with a low complication rate.

Record Date Created: 20040130

Record Date Completed: 20040610

3/7/7 (Item 7 from file: 155) [Links](#)

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MEDLINE(R)

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13034635 **PMID:** 11301503

The treatment of unstable distal radius fractures with volar fixation.

Orbay J L

Miami Hand Center, Miami, FL 33176, USA. MIAHANDS@ix.netcom.com

Hand surgery - an international journal devoted to hand and upper limb surgery and related research - journal of the Asia-Pacific Federation of Societies for Surgery of the Hand (Singapore) Dec 2000 , 5 (2) p103-12 , ISSN:

0218-8104--Print **Journal Code:** 9602613

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Stable internal fixation and early motion has not been routinely available for distal radius fractures. Difficulties with the dorsal approach discourage surgeons from internally fixing the most common fracture types. The introduction of a new volar plate with subchondral support fixation allows the treatment of most distal radius fractures with stable internal fixation and early motion while avoiding the complications inherent in the dorsal approach.

Record Date Created: 20010413

Record Date Completed: 20010531

3/7/8 (Item 8 from file: 155) [Links](#)

Fulltext available through: [custom link](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
MEDLINE(R)

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09201789 PMID: 1563162

Canine leg lengthening by the Ilizarov technique. A biomechanical, radiologic, and morphologic study.

Orbay J L; Frankel V H; Finkle J E; Kummer F J

Department of Orthopedic Surgery, Hospital for Joint Diseases, Orthopaedic Institute, New York, NY 10003.

Clinical orthopaedics and related research (UNITED STATES) May 1992 , (278) p265-73 , ISSN:

0009-921X--Print **Journal Code:** 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The mechanical properties of canine tibias lengthened by the Ilizarov method as well as the degree of healing--as determined by the osseous appearance of the limbs using three imaging modalities--were examined as a function of fixator application time. Sixteen mongrel dogs had right tibial lengthening using a two-ring Ilizarov external fixator. The average lengthening was 27 mm. Four groups of four animals were killed at four, six, eight, and ten weeks after the completion of lengthening. The operated and contralateral tibias were examined with biplanar roentgenography, computerized tomography, and technetium scintigraphy. The torsional strengths of the tibias were then determined and histologic analysis was performed. There was considerable variation in the healing rate of the lengthening sites, both within and among groups. Histologic analysis and results of the imaging modalities revealed different degrees of development of the lengthening sites among members of the same group. Two types of mechanical behavior were seen, corresponding to completely and incompletely ossified lengthening zones. The strongest samples were those that had ossified across their lengthening sites by four or six weeks. The degree of recorticalization of the new bone and the extent of formation of a marrow space correlated well with increased torsional strength. The average strength of the fully ossified bones decreased progressively with time, paralleling a decrease in cortical thickness outside the lengthening zone. This seems to be a consequence of stress shielding by the fixator and disuse by the animal.

Record Date Created: 19920521

Record Date Completed: 19920521

3/7/9 (Item 1 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

EMBASE

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12429409 **EMBASE No:** 2004032151

Percutaneous fixation of metacarpal fractures

Orbay J.L.; Indriago I.; Gonzalez E.; Badia A.; Khouri R.

Dr. J.L. Orbay, Miami Hand Center, 8905 SW 87th Avenue, Miami, FL 33176 United States

Operative Techniques in Plastic and Reconstructive Surgery (OPER. TECH. PLAST. RECONSTR. SURG.) (United States) 2003 , 9/4 (138-142)

CODEN: OTPRB **ISSN:** 1071-0949

Document Type: Journal ; Article

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 9

Metacarpal shaft fractures are common but consensus on the best mode of treatment has not been established. Open reduction and internal fixation with plates or screws has been performed for severely displaced fractures. Unfortunately, extensor tendon adhesions and/or unsightly scars frequently follow this form of treatment. Percutaneous flexible intramedullary nailing of metacarpal fractures provides an alternative method that minimizes these problems. The technique is simple and provides the ability to lock the nails to control length and rotation. The nails are inserted using a manually operated slotted awl and usually in an anteroposterior direction to prevent soft tissue irritation around the metacarpo-phalangeal joints. This method utilizes flexible nails (1.5 and 1.0 mm.) and closed fluoroscopically assisted reduction. Rotationally unstable or fractures with a tendency to shorten can be locked proximally using a captured transverse pin which effectively controls length and rotation. Metacarpo-phalangeal flexion block splinting can be used postoperatively and the nails are routinely removed after fracture healing. Experience with this technique has been favorable as it avoids exposure of the fracture, dissection around the extensor mechanism, and scar problems. It has provided excellent functional results and has presented a low complication rate. (c) 2003 Elsevier Inc. All rights reserved.

3/7/10 (Item 2 from file: 73) [Links](#)

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12298758 EMBASE No: 2003411055

Volar osteosynthesis of distal fractures of the radius

OSTEOSINTESIS VOLAR PARA LAS FRACTURAS DISTALES DEL RADIO

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Document Type: Journal ; Article

Language: SPANISH **Summary Language:** ENGLISH; SPANISH

Number Of References: 23

In our experience, the development of the volar approach and a fixed-angle plate that satisfies all the anatomic and physical principles involving the distal end of the radius has yielded empirical experience. Clinical, radiological and functional results, together with a prompt return to daily activities by our patients suggest that the results are satisfactory and that the technique will probably prove to be useful in providing a definitive solution for the problem of fractures of the distal radius.

3/7/11 (Item 3 from file: 73) [Links](#)

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11538368 EMBASE No: 2002109038

Volar fixation for dorsally displaced fractures of the distal radius: A preliminary report

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Journal of Hand Surgery (J. HAND SURG. (USA)) (United States) 2002 , 27/2 (205-215)

CODEN: JHSUD ISSN: 0363-5023

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

Number Of References: 22

Using a volar approach to avoid the soft tissue problems associated with dorsal plating, we treated a consecutive series of 29 patients with 31 dorsally displaced, unstable distal radial fractures with a new fixed-angle internal fixation device. At a minimal follow-up time of 12 months the fractures had healed with highly satisfactory radiographic and functional results. The final volar tilt averaged 5degrees; radial inclination, 21degrees; radial shortening, 1 mm; and articular incongruity, 0 mm. Wrist motion at final follow-up examination averaged 59degrees extension, 57degrees flexion, 27degrees ulnar deviation, 17degrees radial deviation, 80degrees pronation, and 78degrees supination. Grip strength was 79% of the contralateral side. The overall outcome according to the Gartland and Werley scales showed 19 excellent and 12 good results. Our experience indicates that most dorsally displaced distal radius fractures can be anatomically reduced and fixed through a volar approach. The combination of stable internal fixation with the preservation of the dorsal soft tissues resulted in rapid fracture healing, reduced need for bone grafting, and low incidence of tendon problems in our study. Copyright (c) 2002 by the American Society for Surgery of the Hand.

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11416971 EMBASE No: 2001433191

The extended flexor carpi radialis approach: A new perspective for the distal radius fracture

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Techniques in Hand and Upper Extremity Surgery (TECH. HAND UPPER EXTREMITY SURG.) (United States) 2001 , 5/4 (204-211)

CODEN: THUEA ISSN: 1089-3393

Document Type: Journal ; Article

Language: ENGLISH

Number Of References: 9

3/7/13 (Item 1 from file: 5) [Links](#)

Fulltext available through: [SCIENCEDIRECT](#)

Biosis Previews(R)

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0014973948 Biosis No.: 200400344737

Fixation system with multidirectional stabilization pegs

Author: Orbay Jorge L (Reprint); Leone James; Steffen Dennis L

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Journal: Official Gazette of the United States Patent and Trademark Office Patents 1284 (4): July 27, 2004 2004

Medium: e-file

ISSN: 0098-1133 _(ISSN print)

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: A fixation system includes a plate intended to be positioned against a bone, a plurality of bone screws for securing the plate along an non-fractured portion of the bone, and a plurality of bone pegs which extend from the plate and into bone fragments of the fracture to provide a supporting framework. The pegs can be oriented at various angles relative to an axis normal to the lower surface of the plate. For each peg, once the peg has been appropriately positioned within the peg hole, a set screw is threaded into the peg hole and tightened, thereby securing the peg in the selected orientation.

3/7/14 (Item 2 from file: 5) [Links](#)

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0014900645 Biosis No.: 200400271402

Fixation device for metaphyseal long bone fractures

Author: Orbay Jorge L (Reprint); Castaneda Javier

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1282 (1): May 4, 2004 2004

Medium: e-file

ISSN: 0098-1133 _(ISSN print)

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: A fixation device is provided which includes a proximal nail portion and a distal plate portion. The nail portion includes a flexible tapered section, and a rigid distal section larger in diameter and is adapted to be inserted into a medullary canal of a fractured bone. The plate portion has a low, narrow profile and includes three longitudinally displaced peg holes, each of which is adapted to orient a peg in a different orientation from the others. The plate portion is adapted to be positioned on the outside of a fractured bone when the nail portion is within the medullary canal. The device provides the benefits of both an intramedullary nail and a bone plate in a single device. The fixation device permits a minimally invasive treatment of the metaphyseal fractures that may otherwise be undertreated.

3/7/15 (Item 3 from file: 5) [Links](#)

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0013940521 Biosis No.: 200200534032

Volar fixation system with articulating stabilization pegs

Author: Orbay Jorge L; Leone James (Reprint)

Author Address: Miami, FL, USA**USA

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1261 (4): Aug. 27, 2002 2002

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: A volar fixation system includes a T-shaped plate intended to be positioned against the volar side of the radial bone, a plurality of bone screws for securing the plate along an non-fractured portion of the radial bone, and a plurality of bone pegs which extend from the **plate** and into **bone** fragments of a Colles' fracture. The plate includes including a plurality of screw holes and a plurality of threaded peg holes. The bone pegs can be articulated through a range of angles within respective peg holes and fixed at a desired angle within the range. For each peg, once the peg has been appropriately positioned within the peg hole, a set screw is threaded into the peg hole and tightened, thereby securing the peg in the selected orientation.

3/7/16 (Item 4 from file: 5) [Links](#)

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0013687440 Biosis No.: 200200280951

Volar fixation system

Author: Orbay Jorge L

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1257 (1): Apr. 2, 2002 2002

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: A volar fixation system includes a T-shaped plate intended to be positioned against the volar side of the radial bone, a plurality of bone screws for securing the plate along an non-fractured portion of the radial bone, and a plurality of bone pegs which extend from the **plate** and into **bone** fragments of a Colles' fracture. The plate is a T-shaped plate including a plurality of screw holes and a plurality of threaded peg holes. According to a first preferred aspect of the invention, the peg holes are preferably linearly or parabolically arranged and provided such that the holes are positioned increasingly distal in a medial to lateral direction along the second side. According to a

second preferred aspect, axes through the holes are oblique relative to each other and preferably angled relative to each other in two dimensions. The system includes a guide plate which temporarily sits on top of the volar plate and includes holes oriented according to the axes of the peg holes for guiding a drill into the bone fragments at the required orientation. The volar plate is positioned against the radius and screws are inserted through the screw holes to secure the volar plate to the radius. The bone fragments are aligned, and the guide plate assists in drilling pilot hole. The pegs are inserted through the peg holes and into the drilled holes in the bone. The volar system thereby secures the bone fragments in proper orientation.

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